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POLICE SELF-DEPLOYMENT AT CRITICAL INCIDENTS: A WICKED PROBLEM OR A PART OF THE SOLUTION?

by

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Police self-deployment, described generally as the unauthorized mass response of officers to critical incidents, is alternately condemned or hailed as heroism. Confined to response narratives in after-action reports, existing literature provides no comprehensive definition. Without clear principles, it is challenging to prevent the problems produced by self-deployment such as traffic congestion and diminished command and control; nevertheless, encouraging the ingenuity and initiative leading to heroic and lifesaving acts is equally difficult. Many of the descriptions of police self-deployment match characteristics of wicked problems, as proposed by Horst Rittel and Melvin Webber. Using a case study analysis of police responses to the 2013 Christopher Dorner manhunt and 2013 Boston Marathon bombings, this thesis explored police self-deployment through the lens of wicked problems. A better understanding of the definition resulted in policy and training recommendations, including the suggestions that law enforcement embrace, rather than prohibit, self-deployment and that federally mandated incident command policies incorporate the early minutes of a critical event known as the "edge of chaos."

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POLICE SELF-DEPLOYMENT AT CRITICAL INCIDENTS: A WICKED PROBLEM OR A PART OF THE SOLUTION?

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ABSTRACT

Police self-deployment, described generally as the unauthorized mass response of officers to critical incidents, is alternately condemned or hailed as heroism. Confined to response narratives in after-action reports, existing literature provides no comprehensive definition. Without clear principles, it is challenging to prevent the problems produced by self-deployment such as traffic congestion and diminished command and control; nevertheless, encouraging the ingenuity and initiative leading to heroic and lifesaving acts is equally difficult. Many of the descriptions of police self-deployment match characteristics of wicked problems, as proposed by Horst Rittel and Melvin Webber. Using a case study analysis of police responses to the 2013 Christopher Dorner manhunt and 2013 Boston Marathon bombings, this thesis explored police self-deployment through the lens of wicked problems. A better understanding of the definition resulted in policy and training recommendations, including the suggestions that law enforcement embrace, rather than prohibit, self-deployment and that federally mandated incident command policies incorporate the early minutes of a critical event known as the "edge of chaos."

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TABLE OF CONTENTS

LIST OF TABLES

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LIST OF ACRONYMS AND ABBREVIATIONS

BAPERN	Boston Area Police Emergency Radio Network
BOLO	be on the lookout
DHS	Department of Homeland Security
ICS	Incident Command System
IED	improvised explosive device
LAPD	Los Angeles Police Department
MAC	multiagency coordination center
MBTA	Massachusetts Bay Transit Authority
MIT	Massachusetts Institute of Technology
NCPD	National City Police Department
NIMS	National Incident Management System
PD	police department
SBCSD	San Bernardino County Sheriff's Department

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EXECUTIVE SUMMARY

Police self-deployment refers generally to the unauthorized response of officers to critical incidents. However, existing literature provides no comprehensive definition and is confined to descriptive narratives in after-action reports. If the results of police self-deployment to an incident are undesirable or harmful, self-deployment is condemned. Conversely, if police respond to an event without authorization yet perform—if only in hindsight—daring and creative acts, these officers are cited as heroes and their response is judged a success. Without clear principles, preventing symptoms of self-deployment such as traffic congestion and diminished command and control is challenging; nevertheless, encouraging the ingenuity and initiative leading to heroic and lifesaving acts is equally difficult.

Police self-deployment is most problematic at critical or "black swan" events, especially in the chaotic first stages. Cynthia Renaud uses the term "edge of chaos" to describe this tumultuous period, equating it to a biological process whereby a cell may be created or destroyed.[1] Arguing that the edge of chaos is resistant to the forms and structure of the National Incident Management Systems (NIMS) and the Incident Command System (ICS) specifically, Renaud suggests that improvisation and creativity—hallmarks of self-initiated policing—are the best tools for responders during this period.

A basic understanding of federal protocol clarifies the role of police self-deployment in incident response. Since 9/11, command and control of resources at critical incidents means applying the NIMS, of which ICS is one tool.[2] ICS is a management structure designed to provide flexible, efficient, and effective command in critical incidents.[3] Developed by the fire service to fight wildfires, ICS prohibits self-deployment

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[1] Cynthia E. Renaud, "Making Sense in the Edge of Chaos: A Framework for Effective Initial Response Efforts to Large-Scale Incidents" (master's thesis, Naval Postgraduate School, 2010), 11.

[2] Department of Homeland Security, *National Incident Management System* (Washington, DC: GPO, 2008), 1.

[3] FEMA, "Working Draft: National Incident Management System Refresh," Center for Threat Preparedness, May 2, 2016, 1, http://www.dhhr.wv.gov/healthprep/eventsandannouncements/Pages/NIMS-Refresh-Engagement-Update.aspx.

due to the dangers observed when firefighters freelance or respond individually. Fire departments nationwide have also adopted ICS in day-to-day operations. Law enforcement, unlike firefighting, has less use for ICS in daily operations. In fact, practitioners, policy makers, and researchers accept that ICS in policing has been less effective.[4] Nonetheless, in 2004, the Department of Homeland Security, through a series of presidential directives, mandated that ICS be used as the official template for incident response, and directly connected federal funding to its use by partner agencies.[5]

Many critical events, as well as most routine problems to which law enforcement responds, fall under the definition of wicked problems. First identified by Horst Rittel and Melvin Webber as unique to the realm of public policy, wicked problems span such intractable topics as poverty, terrorism, and the environment, and cannot be solved by traditional scientific methods. Rittel and Webber have identified ten characteristics of wicked problems—they are not a series of tests to mechanically determine "wickedness," but rather insights to judge whether a problem is wicked.[6] Mark Wexler expanded on the morality of these wicked characteristics, specifically in a public planning context. This thesis proposed that viewing police self-deployment through the wicked problem lens clarifies the definition, encompassing what appears to be both a necessary role and a significant problem at critical incidents.

This thesis asked the following questions: How can police self-deployment be better defined and understood through the lens of wicked problems? How can this understanding be used to exploit good police self-deployment, reduce instances of bad self-deployment, and enhance law-enforcement response to evolving critical incidents that employ ICS? To answer these questions, the case narratives from the 2013 Christopher Dorner manhunt in southern California and the 2013 Boston Marathon bombings were first

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[4] Dick A. Buck, Joseph E. Trainor, and Benigno E. Aguirre, "A Critical Evaluation of the Incident Command System and NIMS," *Journal of Homeland Security and Emergency Management* 3, no. 3 (2006): 5.

[5] The White House, *Management of Domestic Incidents* (Homeland Security Presidential Directive 5) (Washington, DC: White House, 2003), 5.

[6] Horst W. J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4 (1973): 155–169.

examined to identify specific instances of police self-deployment as they related to ICS. These incidents were assessed for setting, outcome, and ICS implementation. Then, police self-deployment incidents during the Dorner manhunt and in Boston were measured against each of Rittel and Webber's ten characteristics and Mark Wexler's four moral traits.

A case study approach provided the opportunity to examine detailed aspects of the self-deployment problem in critical incidents. The events examined as case studies—the Christopher Dorner manhunt and the Boston Marathon bombings—were chosen for their similarities *and* differences. Both events involved police as the primary responders and spanned several days, necessitating the establishment of ICS. In addition, the events demonstrated multiple episodes of self-deployment with *both* good and bad results. The event differences highlight the endemic nature of self-deployment to the profession of policing. The Boston Marathon bombings were a terrorist incident that occurred at a fixed urban event in Massachusetts. The Dorner manhunt involved the search for a murderer on an unpredictable rampage throughout southern California, traversing hundreds of miles through vastly different climates. The agencies that responded to both incidents had different jurisdictional responsibilities and varied in size—from the six officers working a shift in Watertown, Massachusetts, to the 1,000 Los Angeles Police officers assigned to daily protective details. Nevertheless, both incidents underwent comparable and repeated issues with self-deployment.

This thesis concluded that police self-deployment is a wicked characteristic of law enforcement and recommended that law enforcement embrace educational methods to improve response. By using open-ended training scenarios, safe spaces for discussion, and collaborative problem-solving, officers may assume more responsibility for their actions and receive recognition for a positive response. Acceptance of police self-deployment also enables supervisors to effectively manage problems by involving street-level officers in decisions. A related recommendation is to create a national after-action report database and a standardized reporting format. These will encourage nationwide inter-agency and professional collaboration—one of the best ways to deal with wicked problems. A centralized database can provide a safe and secure place to share relevant information for all response agencies.

The existing authoritative command structures found in ICS do not encourage the ingenuity and creativity often seen when officers self-deploy to a crisis event at the edge of chaos. Police officers are accustomed to working in this environment, making do with what is available. Nonetheless, ICS authoritative command still fails to prevent the negative forms of self-deployment from occurring, as illustrated in the case studies. A final policy recommendation is for ICS to recognize the edge of chaos and provide guidance for police response during this time.

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I.   INTRODUCTION

Police self-deployment refers to the unauthorized response of officers to critical incidents. The Department of Homeland Security (DHS) mandates first-responder protocol to critical incidents using the Incident Command System (ICS), which prohibits self-deployment. Incident after-action reports have tied police self-deployment to diminished officer safety, poor weapons discipline, and command and control failures. These same reports also use the term to describe lifesaving or heroic acts such as police transport of critically injured victims. As shown in examples from the 1995 Oklahoma City bombing and the 2012 Century Theater shooting in Aurora, Colorado, police self-deployment can be described as both bad *and* good.

On April 20, 1995, a truck loaded with explosives and parked in front of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma, exploded, destroying the building, killing 168 people, and causing extensive damage over several city blocks. The devastation required a massive search and recovery effort that lasted for months. In their *Final Report: Alfred P. Murrah Federal Building Bombing*, the Oklahoma City Police Department describes the mass response of officers to the bombing site as overwhelming and challenging to command:

> Throughout this incident, there was a constant concern as to the number of officers on-site, their locations and duties. It was determined that personnel from a number of agencies were reporting to the site, perimeter and special assignments at all hours. Field personnel frequently utilized the personnel without on-site command post personnel being advised. Given the nature of the disaster, some officers and supervisors left their posts to participate in the rescue operations.[1]

In contrast, the Oklahoma Department of Civil Emergency Management's chapter in the *same* report describes the mass response as lifesaving:

> A massive response of public safety agencies, health care providers and the general public occurred immediately following the explosion. They entered

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[1] Oklahoma City Police Department, "Alfred P. Murrah Federal Building Bombing After Action Report," in *Final Report: Alfred P. Murrah Federal Building Bombing, April 19, 1995*, 235 (Stillwater, OK: Fire Protection Publications, 1996).

the collapsed structure and began to remove victims from the building. They formed human chains, and as victims were located and uncovered, they passed them out of the building and into the street.[2]

These examples highlight the confusion surrounding police self-deployment at critical incidents. Despite the post-9/11 implementation of federally standardized ICS protocols prohibiting self-deployment, the phenomenon still occurs.

In July 2012, at the midnight screening of *The Dark Knight Rises*, a gunman entered the Century 16 movie theater in Aurora, Colorado. Using tear gas grenades and several firearms, he killed twelve and injured over seventy people. Sam McGhee details violations of ICS protocol in his description of police response to the Century 16 Theater shooting:

> The initial response lacked a coordinated, formalized mutual aid staging area or staging officer, resulting in uncoordinated efforts and confusion. Officers from other jurisdictions, at times self-assigned, duplicated efforts or engaged in activity not aligned with current needs.[3]

This initial response did not align with federal protocol, yet the Tri-Data Division's after-action report describes these same violations as lifesaving measures:

> At least 27 victims were transported to hospitals in police cars, with at least one officer making multiple round trips. If police officers had not decided to transport victims without waiting for ICS approval, which was outside of existing protocols at the time, a few more victims likely would have died, according to the hospitals.[4]

In both incidents, police self-deployment resulted in crucial lifesaving acts, but also contributed to chaos surrounding the incident.

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[2] Oklahoma City Fire Department, "The Oklahoma City Bombing: Report and Analysis," In *Final Report: Alfred P. Murrah Federal Building Bombing, April 19, 1995*, 111 (Stillwater, OK: Fire Protection Publications, 1996).

[3] Sam McGhee, "The Aurora Theater Shooting Experience: Considerations for Multi-jurisdictional/Multi-disciplinary Response to Mass Shooting Events," *The Police Chief* 83(2016): 24.

[4] TriData Division, *Aurora Century 16 Theater Shooting: After Action Report for the City of Aurora, Colorado* (Arlington, VA: System Planning Corporation, 2014), 18, https://www.courts.state.co.us/Media/Opinion_Docs/14CV31595%20After%20Action%20Review%20Report%20Redacted.pdf. System Planning Corporation's TriData division is a public safety consulting firm, specializing in research, analyses, and management studies in fire protection and emergency medical services, prevention and preparedness, and homeland security. See http://www.sysplan.com/capabilities/fire_ems/.

Police self-deployment resists clear definition and any attempts at elimination.[5] These characteristics are common to "wicked problems," a concept introduced by Horst Rittel and Melvin Webber in the 1970s to distinguish public policy problems that defy resolution through traditional scientific methods.[6] By viewing police self-deployment through the wicked problem lens, this thesis clarifies its definition—encompassing what appears to be both a necessary role and a significant problem at critical incidents.

A.   RESEARCH QUESTIONS

This thesis asks the following questions: How can police self-deployment be better defined and understood through the lens of wicked problems? How can this understanding be used to exploit good police self-deployment, reduce instances of bad self-deployment, and enhance law-enforcement response to evolving critical incidents that employ ICS?

B.   PROBLEM STATEMENT

Defining—and thus influencing—police self-deployment is difficult. If the results of police self-deployment to a critical incident are undesirable or harmful, then self-deployment is condemned.[7] For example, in the Oklahoma City bombing and the Century Theater shooting, self-deployment led to significant challenges with incident command and control, which contributed to the chaos.[8] Conversely, if a large number of officers respond to an event without authorization and perform—if only in hindsight—daring and creative acts such as the emergency medical transport of victims in cruisers, then these officers are cited as heroes and their actions credited with a successful operation.

A basic understanding of federal protocol is necessary to clearly view the role of police self-deployment in incident response. Since 9/11, command and control of resources

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[5] Horst W.J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4 (1973): 161; Horst W.J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4 (1973):163.

[6] Ibid., 160.

[7] The term "condemned" here refers to incidents in which self-deployment is cited in after-action documents and case study discussion in this thesis.

[8] Oklahoma City Police Department, :Alfred P. Murrah After Action Report," 239; McGhee, "Aurora Theater Shooting Experience," 24.

at critical incidents means application of the National Incident Management System (NIMS), of which ICS is one tool.[9] DHS describes NIMS as a "systematic, proactive approach to guide all levels of government, nongovernmental organizations (NGO), and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from the effects of incidents in an all-hazards context."[10] NIMS employs ICS as that systems approach. The DHS premise is that a "common incident management framework" will enable first response agencies to coordinate in five areas: preparedness, communications and information management, resources, command and control, and ongoing maintenance and management.[11]

Historically, ICS was developed by the fire service in the 1970s, after several years of uncoordinated response to California wildfires resulted in extensive loss of life and property. Several agencies joined forces and devised a system to coordinate response, utilizing resources and communications more efficiently. Their success over several years led to nationwide adoption of ICS by most fire departments. The system gradually expanded to include other large-scale, multi-agency events and emergencies. In the aftermath of the 9/11 attacks, the newly created Department of Homeland Security (DHS) facilitated a national effort to "consolidate, expand, and enhance the previous efforts."[12] In 2004, DHS, through presidential directives, mandated that ICS be used as the official template for incident response to critical incidents, connecting federal funding to its use by partner agencies.[13] This mandate forces police agencies, which did not adopt ICS, to train officers and implement applicable response protocols to align with ICS requirements.

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[9] Department of Homeland Security (DHS), *National Incident Management System* (Washington, DC: GPO, 2008), 1.

[10] FEMA, "Working Draft: National Incident Management System Refresh," Center for Threat Preparedness, May 2, 2016, 1, http://www.dhhr.wv.gov/healthprep/eventsandannouncements/Pages/NIMS-Refresh-Engagement-Update.aspx.

[11] DHS, *NIMS*, 7.

[12] FEMA, "Working Draft," 4.

[13] The White House, *Management of Domestic Incidents* (Homeland Security Presidential Directive 5) (Washington, DC: White House, 2003), 5.

C. RESEARCH DESIGN

A case study approach provides the opportunity to examine detailed aspects of the self-deployment problem in specific environments. According to Robert K. Yin, "a case study approach is the preferred method when the main research questions are 'how' or 'why' questions, the researcher has little or no control over behavioral events and the focus of study is a contemporary phenomenon."[14] Police self-deployment is most problematic at critical or "black swan" events. These events are memorialized in after-action reports, which detail positive and negative aspects of the response as well as recommendations for future events. The limitation of after-action reports is their reliance on a hindsight view of the event. Application of wicked problem characteristics to the cases allows for a different interpretation of the events, which can resolve some confusion about the response.

Previous study examines the relationship between ICS and police response, identifying a period labeled "the edge of chaos" and appraising the relationship between critical events and emergency response protocols as wicked problems.[15] This thesis narrows that focus to police self-deployment as a wicked problem in two events, the 2013 Christopher Dorner manhunt and the 2013 Boston Marathon bombings.

These two events, examined as case studies, are examples of incidents that have primary police involvement and wicked problem characteristics. Multiple case studies were chosen to illuminate how self-deployment is endemic to law enforcement and, therefore, a characteristic rather than a problem. These two particular incidents were chosen for their similarities *and* differences. Similarly, both events involve police as the primary responders and occur over several days, requiring the establishment of ICS. Also, both events include multiple episodes of self-deployment with both good and bad results. The event differences highlight the endemic nature of self-deployment to the profession of policing. The Dorner manhunt involved the search for a murderer on an unpredictable

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[14] Robert K. Yin, *Case Study Research Design and Methods*, 5th ed. (Los Angeles: Sage, 2014), 2.

[15] Explained in more detail in Chapter II. See Cynthia E. Renaud, "Making Sense in the Edge of Chaos: A Framework for Effective Initial Response Efforts to Large-Scale Incidents" (master's thesis, Naval Postgraduate School, 2010); Angi English, "Ten Properties of Wicked Problems," *Medium*, June 13, 2016, https://medium.com/homeland-security/ten-properties-of-wicked-problems-a8a9ff67ccdb#.xx4yyjcsl.

rampage throughout southern California, traversing hundreds of miles through vastly different climates. The Boston Marathon bombings were a terrorist incident that occurred at a fixed urban event in Massachusetts. The agencies that responded to both incidents have different jurisdictional responsibilities and are of varying sizes—from the massive amount of personnel assigned to protective details by the LAPD to the six officers working the midnight shift in Watertown, Massachusetts. Nevertheless, both incidents have comparable experiences with self-deployment.

Source material for the case studies was drawn from theoretical literature, publicly available after-action reports, government documents, media and other accounts, and reviews of both events. The narratives and the analysis focus on law enforcement response and specific instances of police self-deployment, looking only briefly at the totality of the events. Other events considered for the case study include the 2013 shooting at the Washington Navy Shipyard, the 2015 San Bernardino terror attack, the 2016 Pulse Nightclub shooting, and the 2012 Century Theater shooting. While each of these events documents instances of police self-deployment, their rapid conclusions produce less data for analysis.

This thesis analyzes the case narratives to identify instances of police self-deployment and to search them for characteristics of wicked problems. Table 1 provides the first part of the analytical tool used for this study, whereby the incidents of police self-deployment as described in each event are compared to a grid describing the characteristics of wicked problems. In the table, the first column names the characteristics of wicked problems as described by Rittel and Webber, and the second column provides explanations. Overlapping with Rittel and Webber's characteristics are Mark Wexler's four moral characteristics, which apply specifically to public policy wicked problems (discussed in greater detail in Chapter II, Section B, Table 3).

Table 1. Wicked Problems Analytical Tool, Part 1[16]

	Rittel and Webber's Ten Characteristics of Wicked Problems	
	Wicked Problem Characteristic	**Description**
1.	"There is no definitive formulation of a wicked problem."[17]	"The formulation is the problem. The process of formulating the problem and of conceiving a solution (or re-solution) is identical, since every specification of the problem is a specification of the direction in which a treatment is considered."[18]
2.	"Wicked problems have no stopping rule."[19]	"There are no criteria that tell when a solution has been found. The process of solving the problem is identical with the process of understanding its nature. The planner terminates work on a wicked problem not for reasons inherent in the logic of the problem."[20]
3.	"Solutions to wicked problems are not true or false, but bad or good."[21]	"There are no 'conventionalized criteria'—many parties are equally equipped, interested and/or entitled to judge the solutions, although none has the power to set formal decision rules to determine correctness."[22]
4.	"There is no immediate and no ultimate test of a solution to a wicked problem."[23]	"Any solution, after being implemented, will generate waves of consequences over an extended-—virtually an unbounded—-period of time."[24]
5.	"Every solution to a wicked problem is a one-shot operation."[25]	"Whenever actions are effectively irreversible and whenever the half-lives of the consequences are long, *every trial counts.* And every attempt to reverse a decision or to correct for the undesired consequences poses another set of wicked problems, which are in turn subject to the same dilemmas."[26]

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[16] For the full, combined, analytical tool, see the Appendix.

[17] Horst W. J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4, (1973): 161.

[18] Ibid.

[19] Ibid., 162.

[20] Ibid.

[21] Ibid.

[22] Ibid., 163.

[23] Ibid.

[24] Ibid.

[25] Ibid.

[26] Ibid.

	Wicked Problem Characteristic	Description
6.	"Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan."[27]	"There are no criteria which enable one to prove that all solutions to a wicked problem have been identified and considered."[28]
7.	"Every wicked problem is essentially unique."[29]	"Despite long lists of similarities between a current problem and a previous one, there always might be an additional distinguishing property that is of overriding importance."[30]
8.	"Every wicked problem can be considered a symptom of another problem."[31]	"The process of resolving the problem starts with the search for causal explanation of the discrepancy. Removal of that cause poses another problem of which the original problem is a 'symptom.' In turn, it can be considered the symptom of still another 'higher-level' problem."[32]
9.	"The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution."[33]	"There is no rule or procedure to determine the 'correct' explanation or combination of them. The reason is that in dealing with wicked problems there are several more ways of refuting a hypothesis than there are permissible in the sciences."[34]
10.	"The planner has no right to be wrong."[35]	"Planners dealing with wicked problems are liable for the consequences of the actions they generate; the effects can matter a great deal to those people that are touched by those actions."[36]

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[27] Rittel and Webber, "Dilemmas in a General Theory of Planning," 164.

[28] Ibid.

[29] Ibid.

[30] Ibid.

[31] Ibid., 165.

[32] Ibid.

[33] Ibid.

[34] Ibid., 166.

[35] Ibid.

[36] Ibid., 167.

D. CHAPTER OVERVIEW

Chapter II reviews the relevant research and literature on police self-deployment, ICS, and wicked problems. Chapter III chronicles the 2013 Christopher Dorner manhunt and Chapter IV the 2013 Boston Marathon bombings, focusing on incidents of police self-deployment. Chapter V evaluates specific instances of self-deployment in each incident as they relate to ICS. Chapter VI uses the wicked problems analytical tool (developed through Chapters I and II, and provided in full in the Appendix) to analyze police self-deployment in the Dorner manhunt and Boston Marathon bombings. Chapter VII draws conclusions and makes recommendations for law enforcement and incident command policy and protocol.

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II.   DEFINITIONS: A LITERATURE REVIEW

This chapter explores existing research on the definitions of police self-deployment, how that literature relates to the Incident Command System (ICS), and wicked problems concepts. The limited literature on police self-deployment is confined mostly to descriptions of response behavior in event after-action reports. Examining the relationship between ICS as a federally mandated protocol and police response to critical incidents provides framing for problems faced by law enforcement. A review of the theoretical writings of Horst Rittel and others discusses the prevalence of wicked problems in incident response and police self-deployment.

A.   DEFINING POLICE SELF-DEPLOYMENT

Despite the vast number of after-action reports and media accounts of police self-deployment, no comprehensive definition for the term exists. In the absence of a definition, discussing the terms used to describe behaviors attributed to police self-deployment provides a starting point for detecting instances of its practice in the narratives presented in Chapters III and IV. Recognition of these terms also clearly illustrates the confusion surrounding a definition of police self-deployment. The after-action report authors identify and describe causal factors for problems with officer safety, traffic congestion, and command and control. Although this thesis uses those descriptions to loosely define police self-deployment, no complete or conclusive meaning exists.

In its after-action report of the Christopher Dorner manhunt, the Police Foundation identifies several instances of self-deployment. First, the authors describe self-deployment as "the independent action of an individual or individuals to an incident without the ability to immediately intervene in an on-going situation or without a request from the jurisdiction in command."[37] *Individual* or *independent agency* are key terms consistently used in after-action reports identifying self-deployment. In combination with the term *unrequested*, these terms suggest that self-deploying officers are "going rogue," acting for their own self-

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[37] Police Foundation, *Police under Attack: Southern California Law Enforcement Response to the Attacks by Christopher Dorner* (Washington, DC: Police Foundation, 2014), 54.

interest rather than that of the public's safety. Describing the scene surrounding the Boston Marathon bombings, Leonard et al. portray self-deployment as an individual response: "There were many self-deployments or self-reassignments in the sense that the movement was initiated by the individual rather than as the result of a mutual assistance request transmitted between agencies and then affirmatively or systematically from a dispatcher to a unit."[38] The request is narrowly defined as originating from an agency or mutual assistance agreement, contributing to the impression that a self-deploying officer is a rogue officer. Timing also plays a role. *Sudden* or *unexpected* are also terms used to describe police self-deployment; for instance, a news report from Boston stated, "The fast-moving situation was made worse by the sudden arrival of police officers who showed up in Watertown without being called—so-called self-deployment."[39] The implication here is that self-deploying officers are impulsive and respond without regard for protocol. Typically, this description is portrayed through photographs of abandoned police cars parked haphazardly, blocking access to or egress from a crisis scene.

One reason the definition of police self-deployment is ambiguous is because the same principles used to describe rogue officers may also be used to describe heroic officers. These same descriptions are used when police self-deployment results in life-saving actions—such as officers, without request and in violation of protocol, transporting victims from the Century Theater shooting to the hospital. Alternatively, San Bernardino Police Chief Jarrod Burguan uses the terms *disciplined* and *undisciplined* to describe self-deployment in the 2013 Dorner manhunt and the 2015 Inland Revenue Center shooting:

> There's a difference between disciplined and undisciplined self-deployment … we pay cops a lot of money, and we expect them to accept responsibility for the things that they do. And part of that responsibility is knowing when you're needed at some place, and going, and knowing when just to be disciplined and stay back and doing what needs to be done here. Both kinds of self-deployment happened with the Dorner manhunt and later at the IRC

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[38] Herman B. "Dutch" Leonard et al., *Why Was Boston Strong?* (Cambridge, MA: Harvard Kennedy School, 2014), 37, https://ash.harvard.edu/files/why_was_boston_strong.pdf.

[39] Phillip Martin, Hilary Sargent, and James Edwards, "'Self-Deployment' May Have Caused Confusion during Boston Marathon Bombing Manhunt," WGBH News, October 16, 2013, http://wgbhnews.org/post/self-deployment-may-have-caused-confusion-during-boston-marathon-bombing-manhunt.

shooting. There were people who were self-deployed and were tactically deployed, or put to work, in civilian-speak, and those that got in the way.[40]

Chief Burguan describes the struggle between positive self-deployment, whereby officers are integrated into the response, and the negative connotation ascribed to undisciplined self-deployment, whereby unassigned officers impede response. That both positive and negative self-deployment exists simultaneously is unique to law enforcement. This is due to the positive role *self-initiated* activity plays in policing. The Police Foundation report on the Dorner manhunt specifically distinguishes *self-initiated* police activity—"the response to a situation witnessed by an officer or in response to a scene where the officer may take immediate action to assist in an evolving on-going incident"—from self-deployment—"the independent action of an individual or individuals to an incident without the ability to immediately intervene in an on-going situation or without a request from the jurisdiction in command."[41] The authors detail self-initiated activity as an integral and positive form of policing, explaining that "basic law enforcement training teaches officers to handle situations on their own. They are trained to seek out opportunities to perform the task assigned to them and self-initiate in the interest of public safety. Agencies measure and evaluate officers based on self-initiated activity."[42] Officers who self-initiate their activity are praised for their innovation and ingenuity. Their actions are not those of a rogue officer. The difference between self-initiated and self-deployed response seems to rest on an individual officer's assessment of *timing*—the immediacy of the need for law enforcement action.

Notably, the terms used to describe police self-deployment—independent or individual agency, unrequested or unauthorized response, and disciplined or undisciplined activity—are almost identical to those used to define self-initiated activity. Moreover, newer law enforcement theories such as community policing (COP) and problem-oriented

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[40] Beau Yarbrough, "How a 2013 Manhunt Helped Prepare San Bernardino Police for a Terrorist Attack," *Inland Valley Daily Bulletin*, February 15, 2016, https://www.policeone.com/patrol-issues/articles/75468006-How-a-2013-manhunt-helped-prepare-San-Bernardino-police-for-a-terrorist-attack/.

[41] Police Foundation, *Police under Attack*, 54.

[42] Ibid.

policing (POP) support this independence and transfer decision-making responsibility to the front-line officer. As the Department of Justice's Office of Community Orientated Policing Services explains:

> Decentralized decision making involves flattening the hierarchy of the agency, increasing tolerance for risk taking in problem-solving efforts, and allowing officers discretion in handling calls. ... [It] allows frontline officers to take responsibility for their role in community policing. When an officer is able to create solutions to problems and take risks, he or she ultimately feels accountable for those solutions and assumes a greater responsibility for the well-being of the community. In addition, providing sufficient authority to coordinate various resources to attack a problem and allowing officers the autonomy to establish relationships with the community will help define problems and develop possible solutions.[43]

Most of the 18,000 or more police departments in the United States have adopted some form of community policing and self-initiated activity in the form of daily contacts, community efforts, and creative solutions to problems. These activities are integrated into an officer's daily assignments through positive evaluations and adjusted patrols.

Self-deployment in policing is identified as mostly problematic—unless an officer can be used at a scene or commits a heroic act. Self-initiated activity is promoted and rewarded, yet the definition is so closely aligned with self-deployment that widespread confusion exists about the nuances. When incident examples are used to define self-deployment, both heroic and negative events are identified. Without clear principles, preventing symptoms of self-deployment such as traffic congestion and diminished command and control is challenging; nevertheless, encouraging the ingenuity and initiative leading to heroic and lifesaving acts is equally difficult.

B. DEFINING THE RELATIONSHIP BETWEEN ICS AND LAW ENFORCEMENT

The fire service is both the originator and the champion of successful ICS implementation in day-to-day operations and at large-scale, multi-agency incidents. In law enforcement, however, practitioners, policy makers, and researchers "recognize that ICS

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[43] COPS, *Community Policing Defined* (Washington, DC: U.S. Department of Justice, 2014), 5, https://cops.usdoj.gov/pdf/vets-to-cops/e030917193-CP-Defined.pdf.

has been most successful among firefighting organizations and less successful with law enforcement."[44] Unlike firefighting, law enforcement has little use for ICS in daily operations. ICS training documents acknowledge that first responders handle more than 95 percent of all incidents without a formal plan.[45] This is especially true of police agencies in which officers self-initiate stops and resolve dispatched calls as a solo patrol. Dick Buck et al. tie this disuse directly to an officer's failure to utilize ICS at large-scale events:

> Police officers who first arrive at the scene resolve most incidents. While they may require some reinforcement, other officers in their precinct usually accomplish this. Thus, when the time comes to participate in a complex disaster involving multiple agencies where ICS could be helpful, law enforcement personnel are not familiar enough with it to implement it successfully.[46]

Additionally, ICS training and certification is laborious, especially for agencies that do not use it daily. In his master's thesis, Eric Seibel acknowledges that advanced ICS training is time consuming, available primarily to firefighters, and dependent upon individual participation at critical events, exercises, and pre-planned events. To become a fully qualified incident manager in ICS requires 433 hours of training plus certification through event experience.[47] There is little incentive for law enforcement command to provide this amount of training for what are essentially black swan events.

In her master's thesis, Cynthia Renaud argues that ICS is also unresponsive to violent incidents, typically those that are driven by unpredictable or criminal human behavior and primary police response. Renaud identifies the ICS failure point as corresponding to a specific period, that of the initial turmoil inherent at the outset of every incident. She compares it to a term used in biology coined *the edge of chaos*:

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[44] Dick A. Buck, Joseph E. Trainor, and Benigno E. Aguirre, "A Critical Evaluation of the Incident Command System and NIMS," *Journal of Homeland Security and Emergency Management* 3, no. 3 (2006): 5.

[45] FEMA, *Introduction to the Incident Command System (ICS-100): Instructor Guide* (Washington, DC: Department of Homeland Security, 2013), 2.39.

[46] Buck, Trainor, and Benigno, "Critical Evaluation," 4.

[47] Eric J. Seibel, "Missing the Mark: Is ICS Training Achieving its Goal?" (master's thesis, Naval Postgraduate School, 2016), 57.

Molecular biologists studying cells have discovered an edge to every cell where individual agents interact with each other and their environment in an atmosphere of disorder and seeming turmoil. Out of that chaos, order can emerge. If an order does emerge, the type ultimately determines whether the cell lives or dies. Scientists have named this area of the cell "the edge of chaos."[48]

Arguing that the edge of chaos is resistant to the forms and structure of NIMS, Renaud suggests that improvisation and creativity—hallmarks of self-initiated policing—are the best tools for responders during this period.[49]

In his master's thesis, Theodore Moody concurs with Renaud's view, especially when ICS is employed at terrorist events. "NIMS/ICS is a tool that is useful in managing some phases of the response to some incidents faced by law enforcement, but may not function well in the chaotic first phase of a law enforcement response to an extreme and novel event—such as an act of paramilitary terrorism."[50] Like Renaud, he reasons that the forms and structural procedures inherent to ICS do not allow for the creativity needed for response to a paramilitary or terrorist attack, during which the perpetrator may be unidentified and future danger is unpredictable.

Basic ICS training, which most police officers have completed due to federal mandate, occurs through classroom presentations with little association to real-life experience. ICS-200, the basic class that introduces responders to the system, mentions this chaotic early period once and offers no clear guidance; the coursework pertaining to later stages of incident response, however, provides specific protocols, personnel assignments and forms.[51] Renaud suggests that incident command and a path to the resolution of the incident must be determined *before* ICS can be established, something that is not conducive to the first minutes of a complex, critical event. The ICS system fails to recognize this period or provide any support, instruction, or guidance to first responders who function

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[48] Renaud, "Making Sense in the Edge of Chaos," 10.

[49] Ibid., 11.

[50] Theodore J. Moody, "Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad," (master's thesis, Naval Postgraduate School, 2010), 1.

[51] Seibel, "Missing the Mark," 65.

during this time. More clearly illustrated in future chapters of this thesis, the edge of chaos is also the period in which positive police self-deployment occurs.

Leonard et al. recognize that NIMS and ICS at the Boston Marathon bombings was successful at the "macro level," improving cooperation and coordination between the leadership of the many agencies that responded. They identify problems, however, at the tactical or "micro level," where individual agents from various disciplines must work together to solve the problem. They suggest that proper identification of the *type* of command might be the solution. "At the macro-level, the process of leadership and management tends to be collaborative and to focus on *cooperation* and *coordination*, but in tactical situations definitive and *authoritative command* is an essential resource."[52] Unlike unified command, which is based on collaboration between agency chiefs, tactical-level commanders must provide quick and decisive answers so that immediate action may be taken. Per Leonard et al., "Someone needs to be 'in charge'—and those present need to recognize who that is and to accept it—or grave and unnecessary danger can be created for responders present at the scene, civilians nearby, and suspects."[53] Identifying that "someone" is at the crux of the issue for both ICS and police self-deployment, especially in situations involving response from many different agencies or during the edge of chaos.

Critical events are inherently complex; criminal events such as terrorism or active shooter situations are even more complicated, with potentially deadly repercussions. In her article "Terrorism as a Wicked Problem," Angela English argues that the command-and-control model currently in use is ineffective against complex threats. "The nature of complexity is that no one individual has the entire answer which highlights the need for people and all levels of community to cooperate with each other on our nation's challenges."[54] Terrorist events require collaborative response at both the macro and micro levels of command. In ICS, collaborative leadership is essential for successful unified command. At the micro or street level, ICS requires authoritative command, which is not

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[52] Leonard et al., *Why Was Boston Strong*, 38.

[53] Ibid.

[54] Angi English, "Terrorism as a Wicked Problem," *Medium*, September 10, 2014, /medium.com/homeland-security/terrorism-as-a-wicked-problem-a06d2f357eb#.zb31wd2k3.

collaborative. Events at the edge of chaos, especially terrorist and criminal events, seem to require a fluid response that is neither strictly authoritative nor collaborative. This complexity and resistance to solutions are characteristic of wicked problems. Analyzing the defining characteristics of wicked problems may help reveal why ICS is ineffective in the early chaotic minutes of an event and why police self-deployment may actually be part of the solution.

C.   DEFINING WICKED PROBLEMS

Wicked problems, identified by Horst Rittel and Melvin Webber as unique to the realm of public policy, span such intractable topics as poverty, terrorism, and the environment. Wicked problems cannot be solved by traditional scientific methods. They exist in opposition to natural science problems, or "those that are definable and separable and may have solutions that are findable."[55] Rittel and Webber use the terms malignant, vicious, tricky, and aggressive to describe wicked problems.[56]

Rittel and Webber created ten characteristics that identify problems as wicked (shown in Table 2). John Camillus clarifies that "these characteristics are not a set of tests that mechanically determine wickedness; rather, they provide insights that help someone judge whether a problem is wicked."[57] Notably, a wicked problem does not need to meet all the characteristics.

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[55] Rittel and Webber, "Dilemmas in a General Theory," 160.

[56] Ibid.

[57] John Camillus, *Wicked Strategies: How Companies Conquer Complexity and Confound Competitors* (Toronto: University of Toronto Press, 2016), 2.

Table 2.   Wicked Problem Characteristics[58]

1.	There is no definitive formulation of a wicked problem.
2.	Wicked problems have no stopping rule.
3.	Solutions are not true or false, but bad or good.
4.	Wicked problems have no immediate or ultimate test of a solution.
5.	Every solution is a one-shot operation.
6.	Wicked problems do not have an enumerable set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.
7.	Every wicked problem is essentially unique.
8.	Every wicked problem can be considered a symptom of another problem.
9.	The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution.
10.	The planner has no right to be wrong.

Since Rittel and Webber's original discussion in the 1970s, wicked problems have been identified in business, project design, and software development. That body of literature suggests that wicked problems are complex, but not unsolvable; they require a different form of attack.[59] C. West Churchman identifies these false solutions as a moral conundrum inherent in public policy wicked problems. He argues that wicked problems by definition cannot be solved, so those who claim to provide solutions to the whole or even parts of the problem are, in turn, morally wrong.[60] He charges the problem tamer with a higher level of responsibility. Mark Wexler, focusing on the moral dilemmas of wicked problems, calls these solutions deceptive, as they divert attention from the wicked problem

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[58] Adapted from Rittel and Webber, "Dilemmas in a General Theory."

[59] Mary T. Tyszkiewicz, Edward R. McCleskey, and Russell Miller, "Updating the National Planning Scenarios: Using Wicked Problems and Capability-Based Planning Concepts for Homeland Security," *Journal of Homeland Security and Emergency Management*, 9 no.4 (2012): 1550. See also John Camillus, "Strategy as a Wicked Problem," *Harvard Business Review* (May 2008): 1–11; Peter Conklin, Peter DeGrace, and Leslie Stahl, *Wicked Problems, Righteous Solutions; A Catalogue of Modern Software Engineering Paradigms* (Englewood Cliffs, NJ: Yourdon Press, 1990).

[60] C. West Churchman, "Wicked Problems," *Management Science* 14, no.4 (1967): 142.

toward principled approaches and software programs—in short, a new "knowledge frontier."[61]

Mark Wexler expands upon Churchman's article and identifies four moral concerns in wicked problems: "the responsibility nexus; the risk of false assurance; the politics of urgency or criticality and avoidance of the unsolvable problems" (also shown in Table 3).[62] In the *responsibility nexus*, the fact that a wicked problem is considered unsolvable adds weight to a problem solver's belief that his assessments are unique.[63] This prevents a complete evaluation of the problem. That same problem solver may fall into the *risk of false assurance* when giving advice or suggesting solutions. Wicked problems have no definitive formulation, making risks impossible to identify and evaluate. Problem solvers may then "promise more than they can deliver."[64] In the *politics of urgency*, by stressing an immediate solution, the problem solver may be providing a false solution to a problem that remains, at its core, unsolvable.[65] Finally, in *confusion over wicked problems*, it may be hard or even impossible to differentiate between tame and wicked problems, leaving the problem solver with no definitive way to ameliorate this confusion.[66]

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[61] Mark N. Wexler, "Exploring the Moral Dimension of Wicked Problems," *The International Journal of Sociology and Social Policy* 29, no. 9. (2009): 532, doi: 10.1108/01443330910986306.

[62] Ibid., 536.

[63] Ibid.

[64] Ibid., 537.

[65] Ibid., 538.

[66] Ibid.

Table 3.   Wicked Problems Analytical Tool, Part 2[67]

WEXLER'S MORAL CHARACTERISTICS

The Responsibility Nexus
"Wicked problem contexts license innovation or, at least, the claimants' (knowledge sellers')
belief that their views are purportedly new and original."[68]

The Risk of False Assurance
"The more wicked the problem, the harder it is for well-intended problem solvers to educate
about risk. In their determination to push the knowledge frontier and distinguish themselves by
their claims, they may promise more than they can deliver."[69]

The Politics of Urgency
"Political refers to the manner in which the attention-getting use of "urgency" can be used to
rally others about a cause of which one claims to have the best answer. The call to urgency
justifies lower scrutiny and monitoring of the solution."[70]

Confusion over Wicked Problem Solutions
"A portion of wicked problems are, unsolvable, but the tame-wicked problem is unclear on how
to distinguish these from other wicked problems that, with great effort, are solvable."[71]

Mary Tyszkiewicz et al. examine how homeland security planners prepare for
future events, specifically how they administer drills and exercises, key preparation
components of NIMS and ICS. They posit that homeland security planners, echoing their
corporate counterparts, try to solve rather than tame wicked problems. In tabletop exercises
and drills, this is most obvious in the use of scenarios with logical and pre-planned
outcomes. The reality of an event, however, produces unexpected and unpredictable events
as it develops, causing responders to divert resources, change plans, and pivot direction.
To combat this, Tyskiewicz et al. recommend planners incorporate wicked problems into
the national planning scenarios, creating events that have no "correct" resolution.[72] This
allows responders to practice creative solutions to problems as they occur without risk of

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[67] For the full, combined analytical tool, see the Appendix.

[68] Wexler, "Exploring Wicked Problems," 537.

[69] Ibid.

[70] Ibid., 538.

[71] Ibid.

[72] Tyszkiewicz, McCleskey and Miller, "Updating the National Planning Scenarios," 7.

disastrous "real" consequences. Svante Edzen also suggests that planners should incorporate wicked problems into exercises. This allows participants to identify and tame the problems collaboratively within the exercise and utilize existing plans and lessons learned from previous events to resolve problems.[73] Both recommendations are more closely in line with the timelines of terrorist or criminal events and more applicable to law enforcement response.

ICS employs strict channels of authority and procedures for responders. While there is collaboration occurring between chiefs and agency leaders—unified command—there is less within lower levels of incident command. At the tactical level, command is authoritative; line officers are expected to follow orders. Keith Grint suggests that this linear decision-making structure in crisis leadership (that of ICS) is itself a wicked problem. Reflecting Churchman and Wexler's morality theories, he states, "A persuasive rendition of the situational context legitimizes a particular form of action that often relates to the decision-maker's preferred mode of engagement, rather than what 'the situation' apparently demands."[74] Within the less collaborative levels of incident command, the direction of the incident resolution can become focused on the commander rather than what is best for the event. Cynthia Renaud connects this tactical command problem specifically to ICS procedures. Incident commanders, per ICS, focus on a resolution of the emergent issue rather than complete understanding of the problem. This desire for efficiency can lead them to take action "even if they are not quite sure yet what they have or what they should be trying to accomplish."[75] If the tactical commander's focus is on giving clear orders without consideration of the overall problem, the entire direction of the response may be affected negatively.

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[73] Svante Edzen, "Table-Top Exercises for Emergency Management: Tame Solutions for Wicked Problems," *47th Hawaii International Conference on System Sciences* (March 2014): 1978, doi:10.1109/HICSS.2014.250.

[74] Keith Grint, "Problems, Problems, Problems: The Social Construction of 'Leadership,'" *Human Relations*, 58, no.11 (2016): 1467.

[75] Cynthia E. Renaud, "The Missing Piece of NIMS: Teaching Incident Commanders How to Function in the Edge of Chaos," *Homeland Security Affairs* 8, no. 1 (2012): 5.

According to Nancy Roberts, taming wicked problems requires "a process of collaboration and consensus."[76] Churchman recognizes this cooperative effort as one that "tames the growl of the wicked problem."[77] Yet collaboration, consensus, and cooperation take time—which is often unavailable in the early moments of a critical incident, as Renaud notes. Accordingly, collaboration is effective at the level of unified command but at odds with the authoritative command structures of ICS at the tactical level.

NIMS and ICS strive to identify, control, and solve problems caused by critical incidents. Suggesting that ICS or NIMS can solve rather than tame a critical incident may actually be a wicked problem in and of itself. Police self-deployment, when successful or positive, may provide a collaborative process to tame an event during the edge of chaos. Embracing that collaborative process is currently not part of the ICS literature, which means that law enforcement remains officially prohibited from even positive self-deployment in critical incidents.

Self-deployment in policing has both positive and negative attributes. Some self-deployment results in heroic actions, but it can also be attributed to problems with traffic control and officer safety. As previously mentioned, self-deployment may also be confused with self-initiated activity. Independence, individual responsibility, and creativity at the front lines are not only encouraged but part of the professional policing models in community and problem-oriented policing. These models do not conform to the prohibition on self-deployment in ICS. The channelized processes and structures of ICS at the tactical level require adherence to command protocols. If these command protocols are enforced by an incident commander without regard for the total problem, the entire direction of the response may be negatively influenced. This is especially apparent during the edge of chaos.

Many of the events and problems that law enforcement responds to are defined as wicked problems. Unknowingly, officers tame rather than solve problems on a daily basis.

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[76] Nancy Roberts, "Coping with Wicked Problems: The Case of Afghanistan," in *Learning from International Public Management Reform: Part B*, Volume 11, eds. Lawrence Jones, James Guthrie, and Peter Steane, 353–375 (Bingley, UK: Emerald Group, 2001), 372.

[77] Churchman. "Wicked Problems," 141.

To tame wicked problems, collaboration between problem solvers is essential. Within ICS, unified command uses collaboration; at the tactical level, and most especially during the edge of chaos, however, authoritative command is prevalent. Authoritative command does not encourage the ingenuity and creativity that is often seen when officers self-deploy to a crisis event during the edge of chaos. Nonetheless, ICS authoritative command still fails to prevent the negative forms of self-deployment from occurring.

III. CASE STUDY NARRATIVE: 2013 CHRISTOPHER DORNER MANHUNT

On February 3, 2013, Christopher Dorner began a murderous rampage in southern California, seeking revenge for his termination from the Los Angeles Police Department (LAPD) four years earlier. He targeted law enforcement officers, their families, and others he felt were connected to his grievances. Dorner killed four and wounded three during the manhunt; three civilians were also accidentally shot by police. The rampage ended with a deadly stand-off at a rural cabin on February 12, 2013. This narrative is not a comprehensive portrayal of all events that occurred or all agencies that responded. The focus is on incidents of police self-deployment and the circumstances that surrounded them.

A. SUNDAY, FEBRUARY 3, 2013

At 9:00 p.m., the bodies of Monica Quan and her fiancé Keith Lawrence are discovered in Lawrence's parked car at their condominium in Irvine, California. The car is still running and its headlights are on. The crime scene looks like an assassination, or a "hit," as both victims have been shot a total of fourteen times. The Irvine Police Department (PD)[78] discovers no immediate motives—Monica Quan is still wearing her engagement ring. Strangely, no neighbors report hearing the shots. Irvine detectives suspect a weapon with a silencer may have been used. Monica Quan was an assistant college basketball coach and the daughter of retired LAPD Captain Randal Quan. Keith Lawrence was a campus officer at a local college.[79] Irvine PD begins an intensive homicide investigation.

B. MONDAY, FEBRUARY 4, 2013

About ninety miles south of Irvine and just north of the Mexican border in National City, California, an auto worker discovers police equipment while emptying trash into a

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[78] PD is used as an abbreviation for any police department, not specifically the Irvine department.

[79] Nicole Santa Cruz, Lauren Williams and Kate Mather. "Friends, Investigators Seek answers in Killing of O.C. Couple," *Los Angeles Times*, February 5, 2013, http://articles.latimes.com/2013/feb/05/local/la-me-0205-irvine-slayings-20130205; Police Foundation, *Police under Attack*, 13.

dumpster. National City Police Department (NCPD) inventories body armor, bullets, a ballistic helmet, and pieces of an LAPD uniform including a nameplate engraved with the name "Dorner." In the pocket of the uniform is a notebook with the name and serial number of LAPD Officer Teresa Evans. NCPD calls LAPD and leaves a message for Sergeant Evans. LAPD tells Irvine PD that no one by the name of Dorner is employed by the department.[80]

Sergeant Evans calls NCPD back almost immediately, as she is very familiar with the name Dorner. According to the Police Foundation,

> In 2007, [Evans] had been partnered with (LAPD) Officer Christopher Dorner as his training officer. The partnership had ended in a prolonged dispute when Dorner accused her of kicking a suspect during an altercation. A disciplinary review hearing had cleared Evans and convinced LAPD officials that Dorner had lied because he was about to receive a negative review. A Board of Rights hearing had found Dorner guilty of lying, and he was fired by the LAPD in 2009. He appealed to the Superior Court and the State Court of Appeals over the next two years, but the firing was upheld in both courts.[81]

Struck by the "spooky" way Dorner stared at her during the hearings, Sergeant Evans believes that he still blames her for his firing. Since then, she has remained fearful that Dorner would seek revenge.[82]

C.   TUESDAY, FEBRUARY 5, 2013

When Sergeant Evans reports to work for the overnight shift, she learns of the double homicides of Monica Quan and Keith Lawrence. She remembers that Monica's father, retired LAPD Captain Quan, defended Dorner at his disciplinary hearing, and Evans immediately makes the connections among Dorner and Quan, the discovery of the items, and the murders. Evans phones the Irvine PD with the alarming information.[83]

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[80] "Timeline: The Christopher Dorner Manhunt," *Los Angeles Times*, February 8, 2013, http://timelines.latimes.com/statewide-manhunt-ex-lapd-officer/; Police Foundation, *Police under Attack*, 15.

[81] Police Foundation, *Police under Attack*, 15.

[82] "Timeline," *Los Angeles Times*.

[83] "Timeline," *Los Angeles Times*.

D.   WEDNESDAY, FEBRUARY 6, 2013

With the connection to Christopher Dorner established by Sergeant Evans, Irvine police drive to National City and view a surveillance video of a large black man matching Dorner's last known appearance removing uniforms and other items from a dark Nissan Titan pickup truck with a roof rack and placing them in the dumpster.[84] Meanwhile, in Irvine, investigators locate what will later be called the "Dorner manifesto" on his Facebook page. The memo reads, "From: Christopher Dorner; To: America; Subj: Last Resort." The rambling, 11,000-word document claims the LAPD is corrupt, racist, and unfair. Dorner declares "unconventional and asymmetric warfare" on the LAPD, the department's families, and its associates. Listing the names of LAPD officers and their families, he threatens, "I never had the opportunity to have a family of my own, I'm terminating yours." He blames the LAPD for his recent unfavorable discharge from the Navy Reserve. He boasts about his marksmanship, military experience, and prowess. He writes about expecting death from his future actions. In the same document, he also catalogs his favorite movies, celebrities, and politicians and leaves long-winded farewell messages for his friends. Significantly, he also describes purchasing silencers for his guns in Nevada. Irvine police contact the LAPD and immediately establish a multi-agency command post.[85]

The LAPD assigns protective detail teams to more than forty addresses throughout southern California that correspond with the names in Dorner's manifesto. The list eventually swells to seventy-seven, involving the unprecedented assignment of 1,000 officers daily. By the end of the day, Irvine PD holds a news conference identifying Dorner as a suspect in the homicides of Monica Quan and Keith Lawrence and requesting the public's help to locate him.

Shortly after 10:00 p.m., Dorner tries to hijack a boat in Point Loma, ninety miles south of Irvine, in an attempt to escape to Mexican waters. He threatens the 81-year-old

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[84] Police Foundation, *Police under Attack*, 16.

[85] Ibid., 17; Christopher J. Dorner, "Manhunt Manifesto," *Los Angeles Times*, February 7, 2013, http://documents.latimes.com/christopher-dorner-manifesto/.

owner with a gun and ties him up. An apparently inexperienced boater, Dorner tangles the mooring line into the propeller, disabling the boat. He flees.[86]

E.   THURSDAY, FEBRUARY 7, 2013

At 1:00 a.m., one hundred miles north of Point Loma near Corona, California, a tow-truck driver at a gas station recognizes Dorner and his vehicle from the broadcast description. The driver alerts two LAPD officers pulling into the gas station, who are on their way to a target address in Corona. Dorner drives by the station as the three of them watch. Immediately, the officers pursue him. When the pickup truck disappears down an exit ramp, the officers follow and come under intense gunfire, as if Dorner is waiting in ambush. A round grazes one officer's head, and the cruiser is struck, rendering it inoperable. With their LAPD radios out of range and cell phones incapacitated, the officers are forced to flag down a passing motorist to notify the California Highway Patrol. A subsequent investigation reveals that the cruiser was struck twenty-nine times by shots fired from a semi-automatic rifle. The officers note they did not hear the shots. Shortly after the incident, a "be on the lookout" (BOLO) for Dorner and his Nissan Titan is broadcast.[87]

At 1:30 a.m., fifteen miles away in Riverside, two officers on routine patrol are stopped at a traffic light. Witnesses watch a man driving a dark Nissan pickup roll through the red light, draw parallel to the cruiser, point a rifle out his window, and fire over another car directly into the cruiser eleven times. One officer is killed almost instantly; the other is critically wounded. A witness follows the shooter's pickup for a short distance and identifies it as Dorner's. A second witness assists the injured officers at the scene. "Officer down!" interrupts the BOLO broadcast of the Corona shooting on the radio.[88] At 2:00 a.m., one hundred miles from Riverside, an abandoned briefcase and LAPD badge belonging to Christopher Dorner are found on a street near Lindbergh Field in San Diego.[89]

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[86] Police Foundation, *Police under Attack*, 19.

[87] Ibid., 20.

[88] Ibid., 21; "Timeline," *Los Angeles Times*.

[89] "Timeline," *Los Angeles Times*.

Three hours later, in Torrance, sixty miles from Riverside, several LAPD officers are assigned to a protective detail. Torrance police are aware of the target location, but are not actively assigned to the address or in communication with the LAPD officers. All of the officers have heard the BOLOs for the seemingly random killings and are on high alert. In the Police Foundation report, LAPD officers on detail describe watching a dark pickup truck with its headlights off "move slowly from one side of the street to the other, as if seeking a particular address."[90] The truck does not match the description of Dorner's vehicle, but as the truck approaches their position, the officers open fire, shooting as many as one hundred times. They shoot and injure the occupants, two Hispanic women, ages 71 and 42, delivering newspapers.[91]

Meanwhile, only a few blocks away, Torrance police stop another pickup turning onto the street where the LAPD detail is located. Recognizing that it does not match Dorner's, the officers release the white male driver. As he drives away, the Torrance officers hear a fusillade of shots coming from the location of the LAPD detail. Torrance officers seize rifles from the patrol vehicle and call out "shots fired" on the radio. A second Torrance cruiser on patrol a few blocks away hears the call and responds. The officers in the second cruiser see the abandoned first Torrance cruiser, doors wide open, and a pickup driving away. Instinctively, the officer driving the second cruiser crashes into the pickup truck in an attempt to stop it, and the passenger officer fires a shot through the windshield. Fortunately, the white male operator emerges from the pickup truck uninjured.[92]

Nearly five hours later and fifty miles from Riverside in Big Bear, California, a recreation and national forest area, police investigate a burning pickup truck believed to be Dorner's. The smoldering vehicle is found abandoned in a location with easy access to the ski resorts and cabins along Route 38, one of the few roads in and out of the area. Locating Dorner becomes even more urgent when police learn that area resorts are celebrating Police and Fire Appreciation Day. The annual event brings many police officers and firefighters

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[90] Police Foundation, *Police under Attack*, 24.

[91] Ibid.

[92] Ibid., 25.

to the area. The event is cancelled, and vehicles are required to go through checkpoints to leave the mountain area.[93]

Securing the pickup as evidence proves problematic as several departments claim jurisdiction. The San Bernardino County Sheriff's Department negotiates between two counties and police departments: Irvine PD, which has a search warrant for the truck based on evidence collected from the double homicide, and Riverside PD, which claims the truck provides a direct nexus to the murder of one police officer and attacks on three others. The situation is resolved, but no organized unity of effort among the departments is established.[94]

Despite the absence of any formal mutual aid requests, patrol officers, detectives, and chiefs of police from all over southern California rush to Big Bear Lake by car and helicopter. Most of the officers from the southern regions are ill prepared for the extreme cold of the mountain ski resort's 7,000-foot altitude and have no familiarity with the wilderness search area. The Police Foundation's after-action report states there are several incidents of "individuals and small teams of officers conducting searches and activities without direction from the incident commander," based on interviews of responding officers.[95]

A door-to-door search of the Big Bear area begins, involving hundreds of county personnel from different agencies formed into teams. Most of the thousands of cabins in the rural and heavily forested area are unoccupied in winter, and many have no radio or cell phone reception. Teams must always have an officer in a nearby spot with reception to relay information. The San Bernardino County Sheriff's Department establishes a command post at the Bear Mountain Golf Course Clubhouse to oversee the search

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[93] Christopher Goffard, Joel Rubin, and Louis Sahagun, "Chapter Four: A Killer Vanishes: Charred Truck on Icy Road Draws Pursuers to Big Bear," *Los Angeles Times*, December 13, 2013, http://graphics.la times.com/christopher-dorner-manhunt/#chapter-four; Police Foundation, *Police under Attack*, 24.

[94] Police Foundation, *Police under Attack*, 49.

[95] Ibid., 54, 55.

operations and control the media, who are flooding the region. Big Bear Valley schools are placed on lockdown and later closed.[96]

CNN anchor Anderson Cooper tweets that he has received a package from Dorner. Inside are a note, DVD, and LAPD commemorative coin. The coin, given to Dorner by former LAPD Chief William Bratton, who also approved his termination, has what appears to be bullet holes through it. Former Chief Bratton's name is on the manifesto list.[97]

F.   FRIDAY, FEBRUARY 8, THROUGH MONDAY, FEBRUARY 11, 2013

A massive winter storm hits the Bear Mountain communities, dumping several feet of snow. Temperatures plummet. Searches continues in blizzard conditions. Authorities speculate that, unless Dorner has found shelter, the conditions are not conducive to his survival. The few roads leading in and out of Big Bear become impassable and are temporarily closed.[98]

Authorities scale back the search and refocus the massive effort. The command post at the golf course is relocated to the Big Bear police substation, where an operations center is already running.[99] In an effort to communicate with Dorner, the LAPD announces that it will review his termination case. The Los Angeles mayor announces a $1 million reward for information leading to Dorner's arrest.[100] To process the disjointed and massive amount of information the investigation is producing, a joint regional information center opens in Norwalk, one hundred miles from Big Bear. Hundreds of tips pour into the Joint Regional Intelligence Center, most of them useless.[101] False sightings of Dorner over the weekend force an evacuation of an apartment complex in San Bernardino and a Lowe's retail store in Northbridge.

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[96] Police Foundation, *Police under Attack*, 27.

[97] Goffard, Rubin, and Sahagun, "Chapter Four."

[98] Police Foundation, *Police under Attack*, 28.

[99] Goffard, Rubin, and Sahagun, "Chapter Four"; Police Foundation, *Police under Attack*, 28.

[100] Goffard, Rubin, and Sahagun, "Chapter Four."

[101] Police Foundation, *Police under Attack*, 54.

G.   TUESDAY, FEBRUARY 12, 2013

Five days pass without any confirmed sightings of Christopher Dorner. Local schools reopen under heavy security, and area residents begin to return to their normal routines as law enforcement continues the investigation.

Around noon in Big Bear, the owners of a condominium resort enter a unit to clean it and find Dorner inside. He gags and ties them up and then steals their car, a Nissan Rogue. After about a half hour, the couple free themselves and call 911. A BOLO is broadcast. The condo is across the street from the former golf club command post. Based on evidence inside the condo, it is determined that Dorner has been holed up inside for several days with access to television reports and, worse, the ability to observe responders.[102]

There are no mutual aid requests, but the sighting causes a rush of law enforcement—including officers, supervisors, and executive level staff—up the mountain, similar to the February 7 response. A few department chiefs recognize the problem and provide specific instructions to their officers to avoid self-deployment. Irvine PD orders its detectives back to the Big Bear patrol station, where they interview the condominium residents. California Highway Patrol assigns its officers to shut down the few roads to the mountain to limit Dorner's escape. The Corona Police Department issues an order specifically prohibiting self-deployment in the Dorner manhunt.[103]

Dorner is spotted by police shortly thereafter in the Nissan Rogue, following closely behind a school bus to evade the deployment of tire deflation devices. Dorner turns onto the rural, snow-covered Glass Road. By the time officers discover the Nissan Rogue, crashed in the snow, Dorner has carjacked a white Dodge pickup from a passing motorist. Before that information is broadcast, he fires on and disables the pickup truck of a game warden responding to the scene. One of the wardens fires his rifle at the fleeing Dorner,

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[102] Goffard, Rubin, and Sahagun, "Chapter Four"; Police Foundation, *Police under Attack*, 32.

[103] Police Foundation, *Police under Attack*, 54.

but the stolen truck continues. With the broadcast of the new information, officers in the area head toward Glass Road.[104]

About fifteen minutes later, six officers, in four vehicles and from different agencies, pull onto Seven Oaks Road from Glass Road, following fresh tire tracks in the snow. They park twenty yards down the road from three cabins. A vehicle carrying two more officers pulls in behind them, parking directly in front of a cabin. The officers start to follow the tire tracks when shots hit their vehicles. The terrain and location mean there is no reception for hand-held radios. One officer runs back to his vehicle and broadcasts "shots fired" and "officer down." One officer is mortally wounded and unconscious; a second is seriously wounded and unable to move. They both lie injured in the snow, directly in the line of fire that appears to be coming from one of the cabins. Initially the officers have difficulty determining which cabin the shots are coming from; again, they cannot hear the shots. One officer tries to move the vehicle shielding the injured officers in an effort to drag them out of the way, but instead leaves them directly exposed. More officers arrive and begin firing into the cabin, providing cover for the exposed officers. Two officers, at great risk, manage to approach the cabin and drag both injured officers to safety. A massive gunfight ensues for about ten minutes. The patrol rifles of thirty to forty officers now ring the cabin. Several officers are trapped and under fire behind a row of vehicles, finally rescued by a tactical tractor that arrives after forty minutes.[105]

The "narrow, snow-lined mountain roads leading to the cabin are so congested with responding police vehicles" that the San Bernardino Sheriff's tactical tractor must be unloaded at some distance from the scene, delaying its response.[106] The Police Foundation later reports "officers pointing rifles down the mountain without knowing the cabin's location, inadvertently at fellow law enforcement."[107] A helicopter from LAPD carrying a tactical team lands, without permission from or coordination with the command post,

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[104] Christopher Goffard et al., "Chapter Five: The Mountain: Flushed from Hiding, a Fugitive Makes His Stand," *Los Angeles Times*, December 15, 2013, http://graphics.latimes.com/christopher-dorner-manhunt/#chapter-five.

[105] Goffard et al., "Chapter Five"; Police Foundation, *Police under Attack*, 35.

[106] Police Foundation, *Police under Attack*, 35.

[107] Ibid., 57.

dangerously close to the scene, endangering officers onboard and complicating the response on the ground.[108]

One of the three roads up the mountain toward the scene is completely closed to all traffic, including police vehicles, but "police officers—including command staff from agencies miles away—drive around the checkpoint."[109] In another incident, the San Bernardino Sheriff's Department command is forced to order detectives from an uninvolved police agency out of the crime scene area. The officers reported to the crime scene area based on orders from their own agency command, rather than from any mutual aid request.[110]

Two hours later, San Bernardino deputies open a hole in the wall of the cabin with the tactical tractor. They broadcast several messages to Dorner. The only response is the deployment of green tactical smoke canisters by Dorner from inside the cabin, indicating he is still alive. The tactical team advises Dorner that they will fire "hot" pyrotechnic gas into the cabin if he does not surrender. Dorner does not respond.[111]

At 4:09 p.m., the tactical team deploys the pyrotechnic gas. One canister lands outside the structure and begins to burn the wall. Dorner releases another green gas canister from inside the structure. The fire spreads along the outside walls.[112]

Shortly thereafter, a single gunshot is heard from inside the cabin. The cabin becomes engulfed in fire. Large amounts of ammunition are heard exploding inside, making it too dangerous for the fire department to approach.

Hours later, the fire is extinguished and a body is located in the basement. Using dental records, Dorner is officially identified on February 14, 2013. The cause of death is a self-inflicted gunshot wound to the head. The same gun that Dorner used to kill himself

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[108] Police Foundation, *Police under Attack*, 37.

[109] Ibid., 57.

[110] Ibid.

[111] Ibid., 38.

[112] Ibid.

is later tied to the murders of Keith Lawrence and Monica Quan.[113] While the threat appears to involve only Christopher Dorner, the investigation goes on for several months, reviewing the incidents surrounding the manhunt.

The Dorner incident began as an investigation into a double homicide by the Irvine Police Department—a process familiar to any police department, even with the unusual "hit" style of the murders. Once the manifesto was located, the case moved in a completely different direction, requiring a larger, more organized response, despite a series of rapid, novel, and violent events. While components of ICS were used in the command post and in the logistics behind the search for Dorner, much of the officers' related training is never incorporated. It was as if ICS, in its current format and structure, was not conducive to resolving this event. As detailed in the next chapters, extreme examples of police self-deployment may hamper the response, or, alternatively, help bring the case to an end.

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[113] Police Foundation, *Police under Attack*, 40.

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IV. CASE STUDY NARRATIVE: 2013 BOSTON MARATHON BOMBINGS

At the annual running of the Boston Marathon on April 15, 2013, two bombs exploded near the finish line, killing three and injuring over two hundred and fifty people. A massive investigation ensued, culminating in a firefight in nearby Watertown and an intense manhunt for Dzhokar Tsarnaev, ending with his capture four days later. This narrative is not a comprehensive portrayal of all events that occurred or all agencies that responded, but is narrowly focused on incidents of police self-deployment and how it affected response and the circumstances around the incidents.

A. MONDAY, APRIL 15, 2013

On Monday, April 15, 2013, at 2:49 p.m., during the 117th running of the Boston Marathon, a bomb explodes in proximity to the finish line in downtown Boston. Within seconds, a second bomb explodes a few hundred yards away. Three people are killed almost instantly, and over two hundred and sixty suffer injuries, including traumatic amputations and life-threatening wounds from flying glass and shrapnel.[114] Because the marathon is a planned event with emergency responders on scene, response is quick. Despite concerns of further explosions, "triage and treatment start immediately at both explosion sites by nearby fire, police, EMS, medical personnel, and bystanders who rush to help the injured."[115] Officers even use cruisers to transport the injured once ambulances become overwhelmed.[116]

By late afternoon, the situation is more organized. Police evacuate all 5,000 remaining marathon runners from the course. Per ICS guidelines, agency and government leaders establish the nearby Westin Hotel as a unified command center. Explosive ordinance mutual aid teams are on scene, clearing suspicious packages and investigating. A twelve-block area is cordoned off for the investigation, with a total of sixty-one

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[114] Leonard et al., *Why Was Boston Strong*, i.

[115] Ibid., 28.

[116] Ibid.

suspicious packages investigated in the immediate aftermath of the bombings. At 4:47 p.m., the first news conference is held. A second one follows shortly after 5:00 p.m. Then, at the third press conference at 6:30 p.m., the incident is publicly identified as a terrorist attack; the FBI is announced as the lead investigative agency.[117]

B. TUESDAY, APRIL 16, AND WEDNESDAY, APRIL 17, 2013

Over the course of several press conferences, the FBI requests information from the public, such as cell phone photographs, to assist in the investigation. Based on early evidence, the FBI is "looking for individuals who may have been carrying black, heavy bags or backpacks that may have contained pressure-cooker type devices."[118] Investigators begin the arduous task of sifting through the massive amount of received data.

A presidential emergency declaration is issued. Mutual aid resources and the Massachusetts Army National Guard continue to assist the Boston Police Department and the transit police, hospitals, and key infrastructure with increased security.[119]

C. THURSDAY, APRIL 18, 2013

At 11:00 a.m., a prayer service is held at the Cathedral of the Holy Cross in Boston with President Obama and other local and federal dignitaries in attendance, adding to the already stressed security responsibilities in the area. Afterward, both the President and First Lady visit the injured at different area hospitals. They depart Boston at 4:00 p.m. Shortly after, the FBI releases photographs of two suspects, "White Hat" and "Black Hat," at a press conference and appeals to the public for help identifying and locating them.[120]

At 10:28 p.m., an armed robbery is reported at a convenience store in Cambridge. A few minutes later, after several unsuccessful attempts to reach Massachusetts Institute

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[117] Massachusetts Emergency Management Agency et al., *After Action Report for the Response to the 2013 Boston Marathon Bombings* (Boston: Commonwealth of Massachusetts, 2014), 23, http://www.mass.gov/eopss/docs/mema/after-action-report-for-the-response-to-the-2013-boston-marathon-bombings.pdf.

[118] Ibid., 25.

[119] Ibid.

[120] Ibid., 26.

of Technology (MIT) Officer Sean Collier by radio regarding calls for shots fired in the area, Collier is found fatally shot in his cruiser parked on the MIT campus in proximity to the armed robbery location. Cambridge officers responding to the armed robbery are rerouted to MIT. The two incidents are initially thought to be related. Notification of the shooting is broadcast over the Boston Area Police Emergency Radio Network (BAPERN), a regional radio channel monitored by several area police agencies. On-duty officers from law enforcement agencies with jurisdiction and within protocol respond to assist with the investigation.[121]

D.   FRIDAY, APRIL 19, 2013

At 12:19 a.m., the Cambridge Police Department responds to a gas station where the victim of a carjacking reportedly escaped his captors. The victim tells police that his vehicle was carjacked in the Allston section of Boston about an hour before, but that the vehicle has anti-theft GPS tracking. Cambridge PD activate the GPS and issue a BOLO for the black Mercedes SUV and the carjackers, noting that the carjackers are armed; a broadcast is made over BAPERN as well.[122] Critically, due to a language barrier, investigators do not learn until several minutes into the victim's interview that the carjackers stated that they are the Boston Marathon bombers, and confessed to killing Officer Collier. The original BOLO does not include this information. Twenty minutes later, the GPS tracking device in the Mercedes alerts officers to 81 Dexter Avenue in Watertown, five miles from MIT. Watertown dispatch notifies its officers. An officer in a marked cruiser responds to Dexter Avenue and locates the Mercedes, inadvertently making eye contact with the operator as he radios to dispatch. The Mercedes and a Honda sedan following closely behind turn left onto Laurel Street. The operator of the Mercedes suddenly stops and exits the vehicle, walking toward the police cruiser while firing a gun. A police supervisor arrives on scene, seconds behind the first officer, and narrowly misses being shot as rounds hit his windshield. A second male exits the Honda, tossing homemade improvised explosive devices (IEDs) at the officers, some of which explode. Under fire,

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[121] Massachusetts Emergency Management Agency et al., *After Action Report*, 26.

[122] Ibid., 27.

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[121] Massachusetts Emergency Management Agency et al., *After Action Report*, 26.

[122] Ibid., 27.

one officer is able to radio "shots fired" but is unable to access his patrol rifle before abandoning the cruiser. Watertown dispatch radios for assistance from other police agencies over BAPERN.[123]

A fierce firefight involving gunfire and exploding IEDs ensues as officers from Boston, Cambridge, Massachusetts Bay Transit Authority (MBTA), the Massachusetts State Police, and nearby communities respond. One suspect is wounded. As officers move to take him into custody, the second suspect, now driving the Mercedes, drives toward the officers; the officers dive out of the way. The second suspect continues, running over and dragging the wounded suspect several feet before fleeing the scene in a barrage of gunfire. Due to the gridlock of police vehicles parked on the neighborhood streets, officers are unable to immediately pursue the Mercedes. The Mercedes is later discovered, abandoned, a few blocks away.[124]

During the melee, MBTA Transit Officer Richard Donahue is shot and critically injured. Watertown dispatchers have ambulances pre-staged for response nearby; however, the gridlock of parked police vehicles makes it difficult for the ambulance to respond. Finally, a Watertown police officer familiar with the area drives the ambulance to the hospital, enabling paramedics, assisted by a trained state police officer, to treat Officer Donahue en route. That transport and the following actions of emergency room personnel are credited with saving his life. After-action reports indicate that this was a "friendly-fire" incident, meaning that Officer Donahue was shot by a fellow responding police officer.[125]

Meanwhile, an unmarked black state police pickup truck responding to the shootout is erroneously reported as stolen. An officer at the scene spots the pickup a few blocks away and shoots at it with a patrol rifle, hitting it multiple times. The plainclothes Boston police officer and Massachusetts state trooper, members of a gang task force, emerge uninjured.[126]

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[123] Massachusetts Emergency Management Agency et al., *After Action Report*, 27.

[124] Leonard et al., *Why Was Boston Strong*, 21.

[125] Ibid.

[126] Massachusetts Emergency Management Agency et al., *After Action Report*, 28.

The wounded suspect is transported to the hospital and pronounced dead. He is identified from fingerprints as Tamerlan Tsarnaev. The suspect at large is then identified as his younger brother, Dzhokar Tsarnaev. "White Hat" and "Black Hat" become Dzhokar and Tamerlan Tsarnaev, the Boston Marathon bombers.

By 1:00 a.m., the scene is secure and the hundreds of officers now present organize into teams to search for the remaining suspect. Unexploded bombs in the street complicate the comprehensive grid search of the neighborhood. Explosive ordinance technicians render the unexploded IEDs and crime scene area safe and the unsuccessful search for Tsarnaev is complete by 6:00 a.m, yet police officers from all over continue to arrive. In an attempt to organize the officers, the nearby Arsenal Mall becomes a staging area and command post location. By early morning, over 1,000 officers are staged at the mall. The Massachusetts Army National Guard sends twenty-one armored vehicles and one hundred and twenty armed military police to assist as part of a mutual aid request.[127]

At 5:45 a.m., during a press conference with police chiefs and government officials, Massachusetts Governor Deval Patrick announces that all transit system service is suspended. He orders residents in six nearby communities to shelter in place, and remain indoors. He also requests that local businesses close and requires state employees who live and/or work in those communities to stay home.[128]

At 6:00 a.m., the Watertown Police Department broadcasts one of two radio requests for all responding officers to report to the Arsenal Mall staging area. Over the course of the day, 2,500 officers from one hundred and sixteen federal, state, and local law enforcement agencies arrive at the staging area.[129] Requests for assistance go out to specific departments and units from the command post. Still, officers arrive uninvited— some do not have department authorization to be there, and many have no jurisdictional authority. As news of the Dexter and Laurel Street incident and escape spread, more officers self-deploy. Other officers never report to the command post. At the command

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[127] Ibid.

[128] Ibid., 29.

[129] Ibid., 7.

post itself, there are no ICS structures in place to handle the massive influx—relief supplies, support, and command are inadequate. There are few orientation sessions, updates on situational awareness, or general guidance from incident command. While most officers do not deploy into the field from the staging area on their own, there are many instances of officers reacting to anecdotal information or radio calls.[130]

A massive, systematic, door-to-door search for the suspect ensues. Law enforcement and SWAT personnel from the FBI, Massachusetts Army National Guard, Boston Police Department, Cambridge, Massachusetts State Police, MBTA, and two regional law enforcement teams—all accompanied by Watertown police officers—form teams and search a twenty-street grid area throughout the day. Staff at the command post orchestrate the searches.[131]

At 8:15 a.m., authorities suspend all taxi service in Boston after reports emerge of a suspicious person carrying a package boarding an Amtrak train going south. Located in Connecticut, the Amtrak train is stopped, searched, and cleared at 9:00 a.m.[132]

Despite the absence of new leads, multiple press conferences occur during the day to update the public. At the Arsenal Mall command post, no logistics chief is appointed to organize incoming personnel. As time goes on, arriving officers do not incorporate into teams or receive assignments. Agency commanders and supervisors concentrate exclusively on command of their own personnel, without support from incident command. Regardless, some officers refuse to acknowledge orders from authorities outside their own agencies. With no formal method for handling assignments, some officers use the radio system, media reports, or professional contacts with colleagues in the affected departments to self-deploy to the area.[133]

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[130] Massachusetts Emergency Management Agency et al., *After Action Report*, 7, 29.

[131] Ibid., 29.

[132] Ibid., 30.

[133] Ibid., 113.

At a press conference shortly after 6:00 p.m., authorities announce the lifting of the shelter-in-place order after completion of the door-to-door search. Dzhokar Tsarnaev remains at large.

At 6:42 p.m., Watertown PD receives a 911 call from a resident at 67 Franklin Street—just outside the search perimeter. He reports that a bleeding man is hiding on his boat, in his yard. The boat is shrink-wrapped with a winterized tarp. The information is broadcast over the radio—police units and multiple tactical teams race to the densely populated neighborhood. Within minutes, over one hundred officers gather around the home.[134]

While tactical command is quickly established, command and control of the officers around the perimeter is haphazard. At 6:45 p.m., the suspect, using what turns out to be a fishing gaff, attempts to lift the cover off the boat. An officer, without authorization, opens fire. Other officers, under the assumption that the initial shot was fired at them by the suspect, start a barrage of contagious shooting that goes on for several seconds despite repeated cease-fire orders from the scene commander. Over two hundred rounds strike the boat.[135]

An hour goes by without response from the person in the boat. A tactical team deploys flash bang ammunition. Subsequent infrared images taken by a state police helicopter show the individual moving, apparently alive. The state police deploy a Bearcat armored vehicle with a remote arm that opens the winterized tarp covering the boat, exposing Tsarnaev. The FBI hostage response team attempts communication. At 8:41p.m., Dzhokar Tsarnaev voluntarily emerges from the boat and is taken into custody. He is transported to the hospital with significant injuries.[136] He is unarmed.

Two bombs exploded at the finish line of the 117th Boston Marathon in 2013. The bombings were unexpected but not surprising. Planning for the Boston Marathon is ongoing, and scenarios, including terrorist events, are discussed and annually practiced

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[134] Massachusetts Emergency Management Agency et al., *After Action Report*, 32, 8.

[135] Ibid., 119

[136] Ibid., 32.

with tabletop and active drills. All first responders are trained in ICS and work assignments specific to the marathon. Nevertheless, there are incidents of both good and bad police self-deployment and evidence that ICS was not entirely effective at the tactical level as events unfolded.

V.   CASE STUDY FINDINGS: SELF-DEPLOYMENT AND ICS

This chapter examines specific instances of police self-deployment in the Christopher Dorner Manhunt and the Boston Marathon bombings as they relate to ICS. Each case is unpacked independently. Incidents of police self-deployment are assessed for setting, incident outcome, and ICS implementation. The conclusion explores similarities and differences between the cases to define police self-deployment and its relevance to ICS.

A.   POLICE SELF-DEPLOYMENT IN THE CHRISTOPHER DORNER MANHUNT

1.   The Setting

The Dorner manhunt begins as an investigation into a double homicide by the Irvine Police Department. Although the case has some unusual factors—evidence of a silencer on the weapon and the ambush, or "hit," style of the murder—the event fits into normal police procedures, firmly under the jurisdiction and control of Irvine PD. Then, events move fast and unpredictably. In the next thirty hours, between the detection of his online manifesto calling for war on LAPD and the discovery of his burning truck in Big Bear, Christopher Dorner assaults and ties up an 81-year-old man in a failed attempt to hijack his boat in Point Loma, ambushes and injures LAPD officers in Corona, and murders Officer Michael Crain while grievously injuring another officer in Riverside. LAPD launches an unprecedented security detail, sending officers to over seventy locations throughout southern California. In Torrance, officers on an LAPD detail mistakenly shoot and injure two women delivering newspapers. Adding to the confusion is the random discovery of Dorner's identification on the side of a road in San Diego. The indiscriminate attacks on police officers and frenetic pace of events clearly illustrate Dorner's intent. It is reasonable to assume that all police officers on or off duty in the southern California area are on heightened alert, concerned for their own safety—and, atypically, for the safety of their families.

2. Police Self-deployment Incidents

a. *The Burning Truck in Big Bear*

According to the Police Foundation, the mass convergence of officers in Big Bear after the discovery of Dorner's burning truck represents the first incidence of police self-deployment.[137] In line with ICS requirements, the San Bernardino County Sheriff's Department (SBCSD) quickly establishes a command post nearby in a golf course clubhouse—unknowingly in sight of the condominium where Dorner is hiding—and an operational command in San Bernardino. Hundreds of officers, most without appropriate gear or knowledge of the region, rush to the area from all over southern California.[138] Some organize into teams under the command of the SBCSD, but reports suggest numerous officers self-organize into small units, performing searches and other activities without direction from incident command.[139] Self-deployed officers who are familiar with the area use their knowledge to forecast routes of escape and potential hiding locations. According to the Police Foundation report, the SBCSD did not request these officers or activate mutual aid. Operating under ICS procedures, the command post is unable to absorb the glut of officers through active assignment, outright refusal, or delegation to standby status.

b. *Standoff at the Cabin*

The discovery of Dorner's burning truck results in the self-deployment of hundreds of police officers to Big Bear. Scene commanders work for days to disperse those officers. Nevertheless, five days later, the same self-deployment scenario occurs when police rush to the cabin where Dorner is cornered.

After he is discovered by the owners of the condominium, Dorner continues his violent rampage. He holds the owners hostage before gagging and tying them up and fleeing in their vehicle, which he crashes in the snow. Dorner then carjacks another man at gunpoint, using his pickup to flee to the cabin. Once discovered at the cabin, he kills

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[137] Police Foundation, *Police under Attack*, 54.

[138] Ibid., 54.

[139] Ibid., 55.

SBCSD Detective Jeremiah MacKay and seriously injures Deputy Alex Collins in an intense gun battle. Under heavy gunfire, officers manage to contain him in the cabin. While no one can be sure what Dorner will do next, the threat to public safety is contained for the first time in the investigation. Nevertheless, the self-deployment scenario at the cabin quickly mirrors the scene at the burning pickup truck. Rogue teams of police officers evade roadblocks set up by colleagues. Officers must unload a tactical tractor—later used to safely move officers and punch holes in the cabin—at some distance from the scene because emergency vehicles block the roads. Officers unknowingly point weapons at one another. An LAPD helicopter, without permission from scene commanders, lands too close to the active crime scene, forcing the SBCSD to alter critical ongoing operations for officer safety.[140]

The Police Foundation report notes that three agencies' officers did not self-deploy to the cabin standoff. Irvine PD detectives in Big Bear Lake investigating leads in the double murder are ordered to remain behind to interview the couple from the condominium attack. California Highway Patrol officers establish a perimeter and shut down vehicular access to the area. Commanders at Corona PD promulgate orders prohibiting self-deployment for the duration of the Dorner investigation.[141] While these actions are professionally responsible, they are in response to what had happened at the burning truck, not due to the outright ICS prohibition on police self-deployment.

3. Command, Control, and ICS

The Dorner case presents an extraordinary amount of sudden and novel events, each one independently qualifying as an incident subject to the structures of ICS. First, Irvine PD responds to the double homicide, an unusual event for the city but not out of the norm for police response. To coordinate the department-wide response, Irvine PD establishes an operation center. Discovery of Dorner's manifesto prompts the invitation of LAPD to the center. Meanwhile, LAPD opens its own operations center to staff the 24/7 protective details. The shootings in Corona and Riverside trigger the opening of a command center

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[140] Police Foundation, *Police under Attack*, 37.

[141] Ibid., 56.

by Riverside PD to coordinate the apprehension of Dorner. When the smoldering truck is discovered in Big Bear, the SBCSD opens an incident command post nearby to oversee the search, and additionally opens a department operations center in San Bernardino. Despite the implementation of ICS at the agency level, the chiefs do not establish a unified command that strategically organizes the investigations or the various searches for Dorner, and fails to coordinate information sharing. According to the Police Foundation report, the lack of a unified command is most clearly embodied in a dispute over evidentiary and investigative control of the burned-out truck. Here, each investigating agency argues for jurisdiction:

> Irvine Police expressed that they had acquired a search warrant before the tragic shootings in Corona and Riverside. The warrant would help serve as a legal basis for obtaining and processing evidence in Orange County. Riverside investigators explained that the shootings in Corona and Riverside presented a direct nexus between the truck and the murder of a police officer and the attempted murder of three others. They further asserted that obtaining a warrant in Riverside County would not be difficult and the truck should remain in San Bernardino.[142]

The Police Foundation notes specifically that, although the SBCSD facilitates the departments' discussions, the launch of a unified command center—an integral piece of ICS—does not occur.[143]

In one attempt to coordinate the rapidly expanding investigation after the Big Bear incident, agency chiefs establish a multiagency coordination center (MAC) at the Joint Regional Intelligence Center in Norwalk, California, one hundred miles from the Big Bear search area. Managed by the Los Angeles County Sheriff's Department, the Joint Regional Intelligence Center conventionally acts as a regional fusion center for criminal drug and terrorism intelligence. As a neutral entity for the Dorner manhunt, the primary function of the MAC is to coordinate assets and organize investigative information from all the involved agencies; however, there is some confusion over whether the MAC is supposed to provide unified command. By definition, the multiagency coordination system under

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[142] Police Foundation, *Police under Attack*, 49.

[143] Ibid.

NIMS provides the "architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration and information coordination."[144] While the MAC provides strategic support for the investigation, it is not designed to oversee the logistics or assignment of tactical and front-line responders.

The Police Foundation's interviews of officers who worked with the Dorner MAC yielded mixed reviews. Overall, the MAC improved collaboration, but not all involved agencies participated equally. Due to the distance from the active scene and the small size of some departments, assigning strategic staff—those empowered to make leadership decisions—proved challenging. Investigators "appreciated open interaction" but also found the intelligence somewhat inaccurate and difficult to use as evidence.[145]

California has a strong network of mutual aid agreements that depend on the integration of ICS. Described by the California Governor's Office of Emergency Management as "an extension of the concept of neighbor helping neighbor," mutual aid in California provides an expanding process for requesting and receiving outside law enforcement or other agency assistance to one in need.[146] California is divided into seven mutual aid regions; agencies in need request assistance first from their local county, then the mutual-aid region, and, lastly, the outside region. The police agencies involved in the Dorner case—the California Highway Patrol, Corona PD, Irvine PD, LAPD, National City PD, Riverside PD, SBCSD, San Bernardino PD, and Torrance PD—spanned five counties and two mutual aid regions. At the cabin, the SBCSD did not request mutual aid. Despite the lack of request, officers self-deployed from many of the involved agencies.

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[144] DHS, *NIMS*, 143.

[145] Police Foundation, *Police under Attack*, 51.

[146] "Mutual Aid System," California Office of Emergency Services, accessed August 31, 2017, http://www.caloes.ca.gov/cal-oes-divisions/law-enforcement/mutual-aid-system.

Remarkably, the two documents that manage law enforcement mutual aid for the state of California do not mention self-deployment at all.[147]

Through the well-established mutual aid system, California agencies have a strong incentive to use ICS; nonetheless, ICS implementation in the Dorner manhunt was problematic, especially at the unified command level. While most departments successfully established their own operations and/or investigative centers, coordination at the macro level never coalesced, perhaps due to the pace of events. Without coordination among all the top levels of command, police self-deployment continued unchecked.

B.   POLICE SELF-DEPLOYMENT IN THE BOSTON MARATHON BOMBINGS

1.   The Setting

The Boston Marathon bombings begin as a response to violence at a planned event; though outside the confines of normal police response, it is not an unexpected scenario. When two bombs explode within seconds of each other on April 15, 2013, at the finish line of the marathon, three people are killed and hundreds suffer injuries, many life-threatening. The marathon is a prestigious event, with participation from elite runners. The course, location, and traditions are internationally renowned. The same holds true for security preparations, with involvement from the state, the city of Boston, the seven communities along the route, federal agencies, and international organizations. Annual preparations based on after-action reviews of previous marathons include adjustments to medical services, security procedures, and other issues. These preparations include drills employing terrorist scenarios.

On April 15, 2013, a massive emergency operations plan overseeing the safety, health, security, and enjoyment of runners and spectators along the route is fully integrated

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[147] *The Law Enforcement Guide for Emergency Operations*, known as the "Red Book," and *The Law Enforcement Mutual Aid Plan* known as the "Blue Book." The Red Book is a "practical field-orientated guide" for ICS implementation at the field level, while the Blue Book "delineates current state policy concerning law enforcement mutual aid." See Dacia Young and Dennis Beene, *Law Enforcement Guide for Emergency Operations*, 2016 ed. (Mather, CA: California Governor's Office of Emergency Services); See Dacia Young and Dennis Beene, *Law Enforcement Mutual Aid Plan*, 2016 ed. (Mather, CA: California Governor's Office of Emergency Services).

and functioning. When the bombings occur, ICS processes already in place are activated and move quickly into a comprehensive terrorism investigation overseen by the FBI. Nonetheless, the region is understandably on edge. A terrorist event has occurred, at an event under heavy security and covered by the worldwide media. The public, from international groups to local citizens, put police under intense pressure to identify and capture the perpetrators.

A few days later, the intensity and speed of events tragically illustrate the suspects' desperation. The FBI broadcasts two photos of suspects, "White Hat" and "Black Hat," after a nationally broadcast memorial service for the victims. Only a few hours later, MIT Officer Sean Collier is murdered while seated in his cruiser. Then, a victim reports being carjacked by two men who tell him they are the marathon bombers and are heading to New York. The stolen vehicle, equipped with GPS, alerts police to Dexter and Laurel Streets in Watertown, where a violent gun battle involving detonating bombs breaks out between police and the two perpetrators. An officer is almost killed by friendly fire; a cruiser is shot up by police. At the end, Dzhokar Tsarnaev runs over his brother and flees on foot into a quiet city neighborhood. As dawn breaks on Friday, residents of Boston wake up to news that the marathon bomber is still on the loose and probably nearby. The police come under more pressure as the city of Boston and several surrounding towns are virtually shut down and a door-to-door search of a twenty-block area by SWAT teams begins. Media reports show heavily armed officers entering homes and Bearcat tactical vehicles in the streets. The Arsenal Mall command post is overwhelmed by responders. Journalists Scott Helman and Jenna Russell describe the feelings that day of both citizens and first responders: "The whole day was like one big pregnant moment and no one knew how it would end."[148] The day seems to end with a press conference announcing that a careful search is unproductive. Dzhokar Tsarnaev remains on the loose.

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[148] Scott Helman and Jenna Russell, *Long Mile Home: Boston under Attack, the City's Courageous Recovery, and the Epic Hunt for Justice* (New York: Dutton, 2014), 185.

2. Police Self-deployment Incidents

a. *The Finish Line*

Leonard et al. and the commonwealth of Massachusetts project management team identify the first incident of police self-deployment at the finish line immediately after the bombs explode. In the rush to treat the injured, officers transport victims to the hospital using their cruisers. Leonard et al. cite this police response as a *positive* use of self-deployment.[149] Despite a substantial physical response to the area and a lack of clear initial command, independent officers self-organize into teams to care for the injured, secure the scene, and evacuate the crowds.

b. *Dexter and Laurel Streets Firefight*

The firefight at Dexter and Laurel Streets in Watertown on Thursday night is an example of positive *and* negative police self-deployment. The intensity of the setting plays an important part in the number of officers that responded.

On Thursday morning, President Obama and First Lady Michelle Obama attend a nationally broadcast memorial service and visit hospitalized victims. On Thursday afternoon, the FBI releases photographs of "White Hat" and "Black Hat" as persons of interest. The photographs are culled from thousands of images, many contributed by marathon participants and spectators. The FBI requests the public's help in identifying the two men. A few hours later, police discover MIT Officer Collier shot dead in his cruiser. An armed robbery occurs in Cambridge; then, a call for a carjacking comes in a few miles away. The victim tells officers that the stolen vehicle has GPS tracking. The GPS alerts to a location at Dexter and Laurel Streets in Watertown. Due to a language barrier, the victim is initially unable to communicate to officers that the two men who attacked him confessed to the Boston Marathon bombings and murder of Officer Collier. That information is broadcast to the police as a fierce gun battle with exploding IEDs ensues between the Tsarnaevs and police. Patrols and investigative units in the area, as well as others listening to the regional BAPERN channel, hear Watertown dispatch call for assistance, including

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[149] Leonard et al., *Why Was Boston Strong*, 38.

the chilling words; "shots fired." Officers respond to Dexter and Laurel Streets from several different police departments—most with appropriate jurisdiction, immediate ability to assist, and apparent authorization from their command—in keeping with the definition of self-initiated policing, rather than self-deployment.

The mass response is not without problems. MBTA Transit Officer Richard Donahue is critically injured, hit by friendly fire. An officer mistakenly identifies an unmarked state police vehicle as stolen and fires at it, striking it several times.[150] Responders randomly park cruisers, leaving a maze of abandoned vehicles, which prevent both immediate pursuit of the fleeing suspect and unrestricted passage of the ambulance carrying Officer Donahue.[151] Nevertheless, neither Leonard et al. nor the Massachusetts project management group conclusively determine if police self-deployment was a causal factor or, alternatively, those issues occurred spontaneously. The mass presence magnified the issues with weapons discipline and impassable streets, but the actual cause of the problems remains less certain.

One positive aspect of having so many officers on scene is the ability to organize hasty search teams at the conclusion of the firefight. These teams fanned out in an unsuccessful effort, organized by commanders on scene, to locate the escaped suspect. Chapter II discusses defining self-deployment based on the results of the event; it is interesting to contemplate whether self-deployment would be a positive aspect of the response if Dzhokar Tsarnaev had been located by the hasty search teams.

c.   Watertown: Arsenal Mall Command Post and Search

On Friday, more than 2,500 officers from 116 agencies respond to Watertown.[152] At the Arsenal Mall command post, hundreds of requested officers remain in the staging area waiting for an assignment, but are never deployed. While the tactical search teams are organized and coordinated by incident command, other responding officers remain in staging, unassigned. There are several reported incidents, all of which turn out to be false

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[150] Massachusetts Emergency Management Agency et al., *After Action Report*, 23.

[151] Leonard et al., *Why Was Boston Strong*, 39.

[152] Massachusetts Emergency Management Agency et al., *After Action Report*, 29.

alarms. Watertown dispatch reports receiving twenty-eight 911 calls on Thursday—a routine day—and five hundred and sixty-six calls that Friday. Self-deployed officers—without request, department authorization, or jurisdictional authority—arrive, adding to the crowd. Theoretically, at a command post operating under ICS guidelines, the logistics section is responsible for providing support to the incident and responders. No logistics section is established at the Arsenal Mall. Arriving officers, self-deployed or otherwise, are not oriented, processed within ICS structures, or given specific assignments. With little oversight or support, self-deployed officers present at the command post, and others who never report in, "chase calls" based on anecdotal information, professional contacts, and overheard radio calls.[153]

d.   The Boat: Final Standoff

Both Leonard et al. and the Massachusetts project management team recognize police self-deployment as a problem at the final standoff. In this instance, the circumstances surrounding that scene again play a significant role in the police response. After a press conference that lifts the day-long shelter-in-place order, a local resident just outside the search area discovers the suspect in a winterized boat in his yard. That information is broadcast over the radio. While the command post is "standing down," or gradually shutting down, discharged officers still have radio communication and are leaving wearing uniforms and in fully equipped cruisers. Many have waited in frustration for an assignment all day. Within minutes, hundreds of these officers respond to the neighborhood, leaving cruisers parked haphazardly in the streets. Tactical teams are assigned to the inner perimeter under the jurisdiction of the FBI. Media images of the scene show uniformed and plainclothes officers from multiple law enforcement agencies crowding the streets that surround the home. Self-deployed activity and the desire to capture Tsarnaev contributes to confusion and chaos in the standoff, including the contagious shooting at the boat and initial uncertainty about who commands the perimeter.[154] Despite the fact that officers

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[153] Massachusetts Emergency Management Agency et al., *After Action Report*, 29.

[154] Ibid., 63.

have Tsarnaev pinned in the boat, plenty of on-scene assistance, and clear avenues to request additional help, the scene remains overcrowded.

3.   Command, Control, and ICS

The Boston Marathon bombings, while unexpected, happened during an annual event for which organizers plan and prepare. Several factors in the preparations for the 2013 marathon prevented more catastrophic consequences: increased medical capabilities after a surge in heat emergencies the year before, explosive ordinance technicians from several states staged or on scene, and ongoing chemical/biological/radioactive/nuclear (CBRNE) device detection. ICS is in place and active at both local and macro command levels. A MAC is already operational, monitoring marathon activities from the Massachusetts Emergency Management Agency (MEMA) bunker in Framingham. In Massachusetts, the MEMA bunker normally operates a MAC for extreme weather disasters as well as planned events like the marathon; this ensures that those present are familiar with each other and -incident protocol. On April 13, 2013, eighty representatives from law enforcement, fire, and EMS agencies; non-government agencies; state emergency management; and federal agencies are stationed at the MAC, providing a strong base to establish and maintain ICS as the event chronology unfolds.[155] Decades of cooperative efforts and planning among the agencies, governments, and businesses involved in the Boston Marathon mean that a unified command is already at work. Nevertheless, law enforcement still self-deploys multiple times: at the finish line, the Dexter and Laurel Streets firefight, the Arsenal Mall command post, and the final standoff in Watertown.

Leonard et al. use the terms "fixed" and "no notice" to separate the two types of events that occurred in Boston. Self-deployment occurred during both event types in Boston. Fixed events are conducive to the structures and processes of ICS. The marathon and the bombing itself were fixed events; ICS structures are in place to deal with the emergency and the events as they evolve.[156] Within minutes of the bombing, agency leaders set up unified command at a nearby hotel. Despite the ferocity of the event, the

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[155] Massachusetts Emergency Management Agency et al., *After Action Report*, 3.

[156] Leonard et al., *Why Was Boston Strong*, 6.

initial structures to contain the damage and begin recovery at the strategic level were operational within minutes. The preparation and strategic coordination manifested most obviously in three press conferences that transpired the afternoon of the bombing. In spite of an active and engaged ICS, there was still police self-deployment. But this was positive self-deployment; some officers provided medical care and rescue, others self-organized to secure the crime scene and render it safe, and others evacuated runners from the course.

Leonard et al. describe the murder of Officer Collier, the firefight, and subsequent manhunt as "no-notice" events;

> As these cascading events unfolded, command had to be organically assembled while events were ongoing and continuing to evolve. By contrast with Monday's events, the rapidly-assembling responders in Watertown had only the doctrine of incident management and their experience and personal relationships with one another to build upon.[157]

Leonard et al. suggest that no-notice events are resistant to the processes of ICS. Nevertheless, at the firefight, arriving commanders assigned groups of officers to conduct a preliminary search for the surviving suspect, after the initial chaos. Officer Collier's murder is also considered a no-notice event, although the response and investigative protocols are part of police routine.

According to Leonard et al. and the Massachusetts project management team, the ICS failure point in Boston occurred at the *micro* or tactical command level. This is also the level at which police self-deployment can most easily be controlled through immediate supervisory oversight. The Massachusetts project management team cites uncertainty over which agency was in charge of the Arsenal Mall command post. In addition, without a logistics section to orient and assign incoming officers, agencies resorted to commanding their own people and resisted authority from outside agencies.[158] While Boston provides a successful example of ICS unified command, police self-deployment still occurred, especially at the Arsenal Mall command post.

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[157] Leonard et al., *Why Was Boston Strong*, 6.

[158] Massachusetts Emergency Management Agency et al., *After Action Report*, 113.

C. COMPARING AND CONTRASTING POLICE SELF-DEPLOYMENT IN DORNER AND BOSTON

Police self-deployment was a universal issue at both events, and there are several incidents that bear similarities worth discussion. At the Boston Marathon and during the searches for Dorner when ICS was established, officers self-deployed, disobeying direct orders. Abandoned police vehicles blocking traffic represent the occurrence of police self-deployment in both events. Despite the best efforts of law enforcement, both Christopher Dorner and Dzhokar Tsarnaev were located by civilians. Violent attacks on law enforcement officers in both events led to increased self-deployment and apparent command reluctance to enforce prohibition of self-deployment.

1. Police Self-deployment Occurred at Fixed Events

Both Dorner and Boston were, at some point, established, fixed events. In California, the search set up after Dorner's burning truck was found in Big Bear is an example of a fixed event, controlled under the auspices of ICS. Self-deployment there may have contributed to further chaos and did not result in the suspect's capture. The Boston Marathon bombings occurred at a fixed event under the full implementation of ICS. Nonetheless, police self-deployed at the Boston Marathon finish line minutes before command and control was implemented. That self-deployment was recognized for ingenuity and may have saved lives.

2. Police Self-deployment Occurred at the Searches

The Dorner manhunt presented a challenging search environment in the Big Bear area, both after location of the pickup truck and after Dorner was located in the condominium. Officers who were assigned to search needed preparations for a rural, snowy wilderness with limited communication. Outdoor skills, knowledge of the area, and proper gear were necessary for both Dorner searches; nonetheless, unprepared officers self-deployed and self-organized into search parties that did not report into ICS. In Boston, the Arsenal Mall command post oversaw house-by-house searches performed by heavily armed tactical teams in an urban residential neighborhood. Nevertheless, police self-deployed en masse to the search locations. At the Arsenal Mall, some self-deployed officers

arrived without authorization and others never reported in, following radio calls or exploiting local contacts for information, creating their own assignments. In both Dorner and Boston, the presence of so many officers distracted commanders in charge of the searches.

3. Abandoned Vehicles Caused Traffic Problems

Abandoned police vehicles clogging roadways are used as markers to identify police self-deployment. In California, congestion caused by abandoned vehicles along the roads leading to the cabin at the final standoff delayed a tactical tractor later used to extract officers trapped by gunfire and safely approach the cabin. In Boston, police vehicles abandoned haphazardly in and along the streets by officers responding to the Dexter and Laurel Streets firefight resulted in police failure to pursue a fleeing suspect and, critically, delayed ambulance transportation of Officer Dick Donahue, critically wounded by friendly fire.

4. Perpetrators Were Located Inadvertently by Citizens

Civilians, not the police, located Christopher Dorner and Dzhokar Tsarnaev. Despite a highly organized cabin-by-cabin search and unauthorized searches of the area conducted by self-deployed officers, the owners of a condominium inadvertently located Dorner and were immediately assaulted. In Boston, at the conclusion of a day-long, door-to-door search by highly skilled tactical teams, Dzhokar Tsarnaev was located by a resident who checked on his winterized boat. Both events triggered massive self-deployment by police. Dorner and the Tsarnaevs' behavior forced and even led police response. Yet self-deployment also added to the chaos. Those in charge of the command posts were never entirely sure where self-deployed officers were or what they were doing, which caused distractions andeven dangerous situations.

5. Police Self-deployment Was Precipitated by Violent Attacks on Police Officers

The Dorner case was about a man bent on extracting revenge upon the police by targeting officers and their families. When the burning truck was located in Big Bear, officers self-deployed in an extreme response to capture Dorner. In Boston, events became personal for police after the murder of MIT Officer Collier. Once the search for Tsarnaev narrowed to Watertown, police self-deployed to the area to join in the search for and capture of a killer. In both cases, officers ignored ICS command and control at the scenes.

Police self-deployment in California and Boston happened under similar circumstances, despite full implementation of ICS, especially when the criminal acts personally affected police. Traffic congestion, long considered a hallmark of police self-deployment, caused problems at both events. ICS's prohibition of self-deployment failed to prevent the phenomenon as it occurred. The police, from command staff to front-line officers, repeatedly self-deployed at both incidents. The next chapter examines police self-deployment incidents at the Dorner manhunt and Boston through the lens of wicked problems. This viewpoint encourages commanders to see the positive and negative aspects as part of the whole issue and allows for solutions to parts of the problem rather than the whole.

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VI. CASE STUDY FINDINGS: SELF-DEPLOYMENT AND WICKED PROBLEMS

In the 1970s, Horst Rittel and Melvin Webber defined wicked problems as those "that cannot be solved by scientific methods, only tamed."[159] They identified ten characteristics (see Table 1 in Chapter I). John Camillus clarified that "these characteristics are not a set of tests that mechanically determine wickedness; rather, they provide insights that help one judge whether a problem is wicked."[160] Notably, a wicked problem does not have to meet every characteristic. Churchman and Wexler expanded on the morality of wicked problems, aligning them more closely with the realm of public policy and government. This chapter explores how defining police self-deployment as a wicked problem changes individual, department, and ICS response. Using Tables 1 and 3 as an analysis tool, this chapter matches each characteristic and the overall moral responsibilities to instances of police self-deployment in the Dorner manhunt and Boston Marathon bombings.

A. WICKED PROBLEM CHARACTERISTICS IN CASE STUDIES

(1) "There is no definitive formulation of a wicked problem."[161]

Police self-deployment, as illustrated in the previous chapters, resists definition. Typically, the narrative of an event provides descriptions of behaviors that are then defined as police self-deployment. No definitive principles exist. Those terms used to define self-deployment are often used to define self-initiated policing. Without a concrete definition, recommendations for improvements in after-action reports are ambiguous, restricted to suggestions for more ICS training or enhanced cooperation between agencies. Since many of the events that involve police self-deployment are black swan events, these recommendations are not fully implemented, leading to self-deployment at the next event and continuing the cycle. This cycle may even occur within an event. During the Dorner

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[159] Rittel and Webber, "Dilemmas in a General Theory," 160.

[160] Camillus, *Wicked Strategies*, 2.

[161] Rittel and Webber, 161.

manhunt, self-deployment occurred when the smoldering pickup truck was found in Big Bear; only five days later, the same scenario recurred when Dorner was surrounded at the cabin.

(2)   "Wicked problems have no stopping rule."[162]

Outside critical events such as the Dorner manhunt and Boston—black swan events—police self-deployment is rarely identified as a problem. Neither a definitive definition nor specific criteria to eliminate self-deployment exist. Proof of a remaining problem manifests in after-action reports for the next critical event. For example, at the Inland Regional Center Shooting in San Bernardino in December 2015, less than three years after the Dorner manhunt, the same significant issues attributed to police self-deployment involving many of the same agencies that responded to Dorner recurred: traffic congestion, poor weapons discipline, and loss of command and control.[163]

(3)   "Solutions to wicked problems are not true or false, but bad or good."[164]

The confusion that surrounds the definition of police self-deployment also frames the solutions. Police self-deployment was good when lives were saved in Boston at the finish line after the bombs exploded. At the Dexter and Laurel Streets firefight, self-deployment was bad when an officer was critically wounded by friendly fire. Seemingly, the results of the incident determine whether police self-deployment is good or bad. No true or false answer exists to determine where or when self-deployment is helpful. Solutions are confined to recommendations for law enforcement to train in NIMS/ICS. No obvious repercussions, such as discipline or funding cuts, are used to penalize self-deployment in law enforcement. Additionally, agencies have no standardized criteria from which solutions can be created.

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[162] Rittel and Webber, "Dilemmas in a General Theory," 162.

[163] Rick Braziel et al., *Bringing Calm to Chaos: A Critical Incident Review of the San Bernardino Public Safety Response to the December 2, 2015, Terrorist Shooting Incident at the Inland Regional Center* (Washington, DC: Community Oriented Policing Services, 2016), 65, https://www.hsdl.org/?view&did= 795341.

[164] Rittel and Webber, "Dilemmas in a General Theory," 162.

(4)   "There is no immediate and no ultimate test of a solution to a wicked problem."[165]

The authors of the after-action reports for the Dorner manhunt and Boston bombings propose additional training and the development of agency policy prohibiting self-deployment as universal solutions. Based on the recurrence of police self-deployment at new events or during the same event—as seen in the Dorner manhunt—these solutions remain ineffective. Regardless, the only current avenue for testing these solutions is at another critical event where the consequences can be either bad or good. Few agencies, as demonstrated in both cases, utilize the applicable tenets of ICS to control self-deployment, even within the same event. At the same time, the structures of ICS have no room to tolerate trial solutions or hypotheses.

(5)   "Every solution is a one-shot operation."[166]

In both the Dorner manhunt and Boston bombings, police self-deployment visibly manifested with hundreds of officers clogging the roads at the cabin and the thousands of officers massed in Watertown. Reviewers and the media note that both situations led to additional problems. Nevertheless, the opportunity to evaluate a comprehensive solution depends on the occurrence of a duplicate event. Examining self-deployment through the lens of after-action reports provides a version of events in hindsight. In Boston, self-deployment was blamed for the confusion and chaos during the firefight at Dexter and Laurel Streets. At the end of the firefight, a suspect was dead, one had escaped, an officer was hit by friendly fire, and police shot up an occupied unmarked cruiser. It remains unclear whether the results would have been different if the officers had not responded. Would there have been additional issues or more severe problems to overshadow those that occurred? That question is impossible to answer.

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[165] Rittel and Webber, "Dilemmas in a General Theory," 163.

[166] Ibid.

(6)   "Wicked problems do not have an enumerable … set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan."[167]

Proposed solutions to police self-deployment are limited to those that fall within ICS and accepted norms for policing. Both are subject to public approval. ICS significantly decreases issues with self-deployment in firefighting, so the expectation is high for success with law enforcement. Nevertheless, law enforcement continues to self-deploy at critical incidents. The Dorner manhunt offers an example of commanders from three agencies who prohibited self-deployment at the cabin scene. Notably, commanders enforced these prohibitions as a result of lessons learned during the event, not as a result of ICS training.

(7)   "Every wicked problem is essentially unique."[168]

Each incidence of self-deployment is viewed as a completely new phenomenon. Law enforcement officers are typically the initial first responders to an event. Their role, unlike that of other first responders, changes as the event progresses. Police officers must react to disparate issues simultaneously. Examples from the Dorner manhunt include the two assaults in Corona and Riverside. After the shots were fired, officers prioritized and treated minor, traumatic, and mortal injuries suffered by their fellow officers; identified and pursued Christopher Dorner; secured an active crime scene; and interviewed witnesses within a short period of time. All these responsibilities fall within law enforcement jurisdiction but still require a careful, methodical response. Police are experts in prioritization; nonetheless the emergent nature of those events required almost constant adjustment. As discussed in previous chapters, ICS offers little training or guidance in those initial minutes of an event.

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[167] Rittel and Webber, "Dilemmas in a General Theory," 164.

[168] Ibid.

(8)　　"Every wicked problem can be considered a symptom of another problem."[169]

Police self-deployment sometimes masks other problems or exists as a symptom of a different problem. In Boston, during the firefight at Dexter and Laurel Streets, did police self-deployment *cause* poor weapons discipline, blocked egress, or problems with command and control? Did the sheer number of officers on scene contribute to the chaos or help with the search? The answers to these questions, as addressed in after-action reports, lie in the success or failure (the good or bad results) of the mission rather than the actual issue of self-deployment.

(9)　　"The existence of a discrepancy representing a wicked problem can be explained in numerous ways."[170]

Because police self-deployment has no clear definition and can be described as either good or bad, discrepancies are always present. For example, at the Boston Marathon finish line, officers were lauded for using cruisers to transport the injured when the medical system was overwhelmed. Nonetheless, their actions were still in violation of department procedure. During the Dorner manhunt, a police helicopter entered the crime scene area, creating a dangerous cross-fire situation; regardless, they were allowed to stay. Self-deployment has no defining principles that completely disparage *or* exonerate the actions of self-deploying officers. In Boston, the officers responding to the shoot-out at Dexter and Laurel Streets became active members of "hasty search" teams. But did this same mass response also allow the suspect to successfully flee the scene? These and other contradictions lead to more discrepancies, creating false solutions—those that can be adjusted to reflect the views of the problem solver.

(10)　　"The planner has no right to be wrong."[171]

Agency chiefs and emergency managers try to foresee as many disasters, failures, and catastrophes as possible when developing critical event plans. When these plans fail or

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[169] Rittel and Webber, "Dilemmas in a General Theory," 165.

[170] Ibid., 166.

[171] Ibid.

something happens that is not forecasted, the planner is held responsible for the consequences. Massachusetts State Police Colonel Timothy Alben (retired) describes this pressure as it relates to his experience with the Boston Marathon bombings: "In this world, you never eliminate risk, you never bring it down to zero ... but we are working very hard at reducing that risk level and managing it to the best of our collective abilities."[172] His statement is an honest appreciation of the challenges planners face—challenges that are not fully respected by ICS, which demands a clear, almost instant comprehensive appraisal of the problem.

The Boston Marathon is an event that occurs annually along the same route, and which involves extensive and detailed planning. The planning process incorporates preparation for terrorist events under NIMS guidelines and ICS structures. Unlike the Boston Marathon, the Dorner manhunt was a no-notice event, governed by the actions of a man on a rampage. Nonetheless, once the bombs exploded in Boston, agencies plunged into a situation similar to the Dorner manhunt, with a timeline dictated by the actions of the Tsarnaev brothers. For a plan to truly succeed, some part of the response must remain unstructured to allow for the unexpected. Unlike scientific processes, however, wicked problems have no room for error *and* no rules to follow. This wicked problem characteristic clearly applies to police self-deployment. With so much at stake, planners behind events such as the Boston Marathon and the Dorner manhunt have no place to practice or make mistakes without the risk of high-stakes failure. ICS requires completion of a plan even before it is enacted or applied to the event and offers little elasticity when events change course rapidly, unless the changes can be forecast. Drills and tabletop exercises do not incorporate wicked scenarios—there is always a "right" response.

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[172] Tim Alben, "Boston Strong Is No Accident," *Watermark* 5, no. 1 (2014): 5.

B. WEXLER'S MORAL CHARACTERISTICS IN CASE STUDIES

(1) Responsibility Nexus

Wexler's responsibility nexus "stems from the absence of clear norms and precedence. Wicked problem contexts license innovation or, at least, the claimant's belief that their views are purportedly new and original."[173] This nexus is at the heart of the issue of police self-deployment. Front-line officers are innovative, trained, and encouraged to self-initiate vehicle stops or investigate crime. This naturally flows into response to critical incidents. The problem with innovation, as presented by Wexler, is the "claimant's belief that his views are new and original."[174] An example in the Dorner manhunt would be the officers that self-deployed, conducting independent searches without direction from the command post or their own agency command. They self-deployed because they believed their participation would make a difference. Similarly, in Boston, during the firefight at Dexter and Laurel Streets, officers responded because they felt they could positively intervene. Defining *when* those ideas are wrong becomes the challenge.

(2) Risk of False Assurance

"The more wicked the problem, the harder it is for well-intended problem solvers to educate about risk. They may promise more than they can deliver."[175] In hindsight, it always appears that adherence to the orderly structures of ICS might have solved police self-deployment at both events. However, evidence of repeated incidents of self-deployment *within the same event* clearly illustrates that adherence to ICS does not work. The promise that ICS can solve all command and control problems for all first response agencies is simply untrue when dealing with self-deployment.

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[173] Wexler, "Exploring Wicked Problems," 537.

[174] Ibid.

[175] Ibid.

(3)   Politics of Urgency

"Those who claim to be acting in wicked problem contexts are rewarded for building up the promissory nature of their ideas and downplaying the risks."[176] Events driven by human behavior are wicked problems. Capturing Dorner and the Tsarnaev brothers ended the violence in both events, but no after-action reports identified a causal problem or concluded that a problem was solved. The Boston bombings were labeled a terrorist event. Terrorism is a wicked problem. The Dorner manhunt resisted all attempts at definition and remains classified as a manhunt for a murderer. Urgent events in both cases drove the street-level or tactical response, aligned with ongoing and complex investigations. Capturing Dorner and the Tsarnaevs before they could attack more people was the urgency driving the solutions in both cases. The solutions changed, however, as the cases progressed. ICS promises to restore order in chaotic situations. Wexler sees this as a sort of siren song; "doing something now, is far better than merely continuing as if there were no emergency or crisis."[177] When problem solvers fail to acknowledge that the problem is wicked and thus unsolvable, the risk is lessened and the problem (in this case the Dorner manhunt and the pursuit of the Tsarnaevs) appears solved.

(4)   Confusion over Wicked Problem Solutions

"A portion of wicked problems are unsolvable, but the tame-wicked problem is unclear on how to distinguish these from other wicked problems that, with great effort, are solvable."[178] Wexler argues that the selling or promotion of one particular method or solution to a wicked problem is morally problematic. The marketing of ICS as a one-size-fits-all response tool falls into this category, especially when dealing with terrorist or criminal events. NIMS and ICS require first-responding officers to identify the causal problem and the resources needed to solve it. These protocols are ideal for fires and disasters; however, when a problem, such as terrorism or a manhunt, resists definition, ICS's linear response structures are less effective. When the authoritarian structures at the

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[176] Wexler, "Exploring Wicked Problems," 538.

[177] Ibid.

[178] Ibid, 538.

tactical level prove problematic or ineffective, there is little for responders to resort to. Police self-deployment, when positive, fills this gap.

Viewing police self-deployment through the lens of a wicked problem clarifies the reasons why it is so resistant to solutions. Police self-deployment matches every characteristic of a wicked problem, illustrating how difficult it is to recognize and how it can be both good and bad, even in the same event. Acknowledging police self-deployment as a wicked problem actually reveals options for proactively diminishing its negative aspects and accentuating its positive aspects, which are discussed further in Chapter VII.

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VII. CONCLUSIONS AND RECOMMENDATIONS

My interest in police self-deployment was first piqued after reading negative after-action reports of the Dexter and Laurel Streets firefight in Boston. The reports suggested that police self-deployment was a causal factor in the traffic congestion that aided Dzhokar Tsarnaev's flight and the accidental police shootings of Officer Donahue and an unmarked cruiser. I viewed the response differently; area officers responded to a call for help, which was dispatched over a regional radio channel, to assist fellow officers who were under fire from weapons and IEDs. The agencies that initially responded to the call for help had jurisdictional authority to be present. From my viewpoint as a police officer, the initial mass response to the firefight was both appropriate and necessary. Conversely, when the after-action reports cited police self-deployment as an underlying factor in command and control problems at the Arsenal Mall the following day, I found myself in agreement with the argument that police self-deployment was problematic.

This thesis concludes that police self-deployment has no clear definition. Definitions based on behavioral explanations at the events are vague and dependent on good or bad results—all characteristics of wicked problems. Thus, my search for a comprehensive definition of police self-deployment morphed into two questions: How can police self-deployment be better defined and understood through the lens of wicked problems, and how can the resulting wicked problem definition be used to exploit good police self-deployment, reduce instances of bad police self-deployment, and enhance law enforcement response to critical incidents? The conclusions and recommendations in this chapter suggest that the law enforcement profession should accept self-deployment as a wicked characteristic of policing. To do so, ICS must acknowledge, and prepare first responders for, the time period known as the "edge of chaos" to limit bad self-deployment and encourage the ingenuity that comes from good self-deployment.

A. CONCLUSION #1: SELF-DEPLOYMENT IS A WICKED CHARACTERISTIC OF POLICING

No distinct definition of police self-deployment emerges from either the literature review or the case studies. Moreover, the case studies also reveal confusion between the terms self-initiation and self-deployment. Further, self-deployment aligns with every characteristic of a wicked problem. If law enforcement accepts self-deployment as a wicked characteristic of the profession, opportunities to tame the bad aspects and exploit the good aspects become accessible.

Self-deployment and self-initiated policing are one part of the complex interdependency between law enforcement and the public. This interdependency is expressed through historical cycles of police actions and theories with increased public oversight at one end and expanded self-initiated police roles at the other. Events resulting in more public oversight of the police include the 1968 Democratic National Convention and, more recently, the 2014 Ferguson, Missouri riots. The actions of officers at both events launched increased public and government oversight and scrutiny. Conversely, community and problem-oriented policing theories promote a flattened hierarchy, encouraging officers to solve problems at the street level with less command oversight. Recently sanctioned active shooter protocols rely on the decisions of first-responding line officers with less permission from command.

Officers work in the realm of wicked problems—including poverty, mental illness, and terrorism—where situations produce more questions than answers and solutions address symptoms of a problem rather than solve the root issue. Unknowingly, most officers already tame, rather than solve, problems in their daily work. Consequently, no silver bullet—individual policy, single training method, or ICS structure—can control bad self-deployment and exploit good self-deployment. These are features central to the very heart of this wicked characteristic; as Keith Grint explains,

> To adopt the rather more prosaic language of Kant, we need to begin by recognizing "out of the crooked timber of humanity, no straight thing was ever made." Put another way, to get some purchase on wicked problems we need to start by accepting that imperfection and making do with what is available is not just the best way forward but the only way forward. We also

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need to assume that no-one has the solution in isolation and that the problem is a system not an individual problem and not a problem caused by or solved by a single aspect of the system.[179]

Clearly illustrated in the Dorner manhunt and in the Boston bombings, police officers "make do with what is available" in times of great uncertainty or chaos. Karl Weick uses the term *bricoleur* to describe this type of person: "Bricoleurs remain creative under pressure, precisely because they routinely act in chaotic conditions and pull order out of them. Thus, when situations unravel, this is simply normal, natural trouble for bricoleurs, and they proceed with whatever materials are at hand. Knowing these materials intimately, they then are able, usually in the company of other similarly skilled people, to form the materials or insights into novel combinations."[180] Police officers, as bricoleurs, are uniquely qualified to tame wicked problems and, with a little "tinkering," can make self-deployment work at critical incidents and in daily patrols. Self-deployment must be understood as a wicked characteristic of policing rather than as a problem that needs to be eliminated.

B.   RECOMMENDATION #1: LAW ENFORCEMENT MUST EMBRACE SELF-DEPLOYMENT

Police agencies have complex hiring processes that typically include written, medical, psychological, and fitness testing as well as comprehensive background investigations designed to recruit candidates with solid qualifications. Academy training

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[179] Keith Grint, "Wicked Problems and Clumsy Solutions: The Role of Leadership," *Clinical Leader* I, no.2 (December 2008): 11.

[180] Karl E. Weick, "The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster," *Administrative Science Quarterly* 38 (1993): 628–652.

Claude Levi-Strauss, in *Savage Mind* coined the term: "The 'bricoleur' is adept at performing a large number of diverse tasks; but, unlike the engineer, he does not subordinate each of them to the availability of raw materials and tools conceived and procured for the purpose of the project. His universe of instruments is closed and the rules of his game are always to make do with 'whatever is at hand', that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of previous constructions or destructions. And the decision as to what to put in each place also depends on the possibility of putting a different element there instead, so that each choice which is made will involve a complete reorganization of the structure, which will never be the same as one vaguely imagined nor as some other which might have been preferred to it." See Claude Levi Strauss, *The Savage Mind* (translated from the French by George Weidenfeld and Nicholson Ltd.) (Paris: Librarie Plon, 1962), 11–12.

stresses the importance of self-initiated activity, yet much of the training fails to encourage critical thinking. Daily experiences of patrol officers reinforce self-direction and individual responsibility in some cases but strict adherence to protocol in others. To exploit the good heroic aspects of self-deployment seen at the Boston Marathon finish line yet control the bad effects—cruisers clogging roads, masses of unprepared officers arriving in Big Bear Lake for Dorner, and the "sea of blue" that moved toward the boat in Watertown—law enforcement must embrace self-deployment.

The bricoleur's tool box can be evaluated and re-stocked. One missing tool is a "safe space" for learning where officers can test hypotheses, ask questions, and discuss issues without the pressure of an ongoing event or fear of reprisal. The current model is the "one-shot operation," in which officers learn on the job at critical incidents and/or a choreographed drill. Police officers have a unique propensity for piecing together solutions with what is available in the moment. Keith Grint calls this innate sense *apperception*— that is, "the ability to relate new experiences to previous experiences, and to recognize patterns in situations that facilitate understanding and resolution."[181] Apperception is what enables officers to survive the edge of chaos. Scenario-based training without pre-determined solutions provides opportunities for experience, collaboration, and a safe place to test hypotheses. Officers need this space to explore their response with less judgment and more open-ended evaluation. Traditional training provides officers with little opportunity to creatively pool resources, openly discuss challenges or create new solutions. The next step in police education should include wicked problems and a "safe space" in the design of scenarios and drills. These two features give police more opportunities to prepare for the unknown.

Closely aligned with a safe space is collective engagement, a tool that requires a single commander to transfer authority to group collaboration. Only collaboration at all levels can successfully address wicked problems.[182] Collective engagement manifests theoretically in community and problem-orientated policing, and practically in modern

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[181] Grint, "Wicked Problems and Clumsy Solutions," 15.

[182] Ibid., 16.

active shooter protocols and the NIMS concept of unified command. Those programs that stress individual responsibility as a crucial part of the whole response encourage good self-deployment and limit bad self-deployment. The downside of collaboration is that it takes time—time that does not exist at the edge of chaos. Nonetheless, collaborators and bricoleurs learn best by *phronesis*—Aristotle's term for practical reasoning:

> Practical reasoning is deliberative, it takes into account local circumstances, it weighs tradeoffs, it is riddled with uncertainties, it depends upon judgment, profits from wisdom, addresses particulars, it deals with contingencies, is iterative and shifts aims in process when necessary. Practical reasoning is the stuff of practical life. It is not the stuff of theoretical science. It is not enduring and it is not foundational. Its aim is to arrive at good but imperfect decisions with respect to particular circumstances.[183]

Phronesis, when based in experience and apperception, proves highly relevant to emergent situations, as described by Keith Grint regarding the role of leaders:

> Phronesis allows leaders to recognize each situation as unique but sufficiently familiar, so that an array of techniques may be deployed. It requires a form of action that focuses directly on fixing the problem itself, not a form of re-education or reskilling. Phronesis is not a set of universal rules or a pocket guide to be drawn upon for solution, but something only achieved through experience and reflection.[184]

The collaboration that occurred in Boston among local, state, and federal law enforcement agency leaders ensured that one voice was heard at press conferences. This collaboration aligns with ICS's concept of unified command, and resulted from years of partnerships, meetings, and mutual assistance among those agencies. Conversely, at the tactical or street level, ICS and agency training leave little space to practice ingenuity and creative response. Agencies must train, also, at the front lines for officers to fully embrace the wicked characteristic of self-deployment.

Understanding that self-deployment is part of police response also gives leadership more responsibility in preventing bad self-deployment. Nonetheless, prohibiting self-

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[183] Elliot W. Eisner, "From Episteme to Phronesis to Artistry in the Study and Improvement of Teaching," *Teaching and Teacher Education* 18 (2002), 375.

[184] Grint, "Wicked Problems and Clumsy Solutions," 16.

deployment is not enough to ensure the success of an operation. According to the Police Foundation's report:

> Failing to give a direct order at the time of the incident implies tacit approval of self-deployment. … However, simply ordering officers not to respond is only half of the solution. Police officers are men and women of action. Therefore, it is equally important that direction be given about what they can do in support of their fellow officers. This requires leaders to work cooperatively with their counterparts involved in the incident to find meaningful and constructive ways to support the lead agency.[185]

By accepting self-deployment as a wicked characteristic of policing, law enforcement leaders have the opportunity to encourage positive and temper negative aspects. To succeed, officers must have the freedom to practice ingenuity as observed at the Boston Marathon finish line and the cabin in Big Bear Lake. Conversely, coordinating the thousands of officers that descend upon an event is equally important to success. Training that embraces the role of an officer as a bricoleur—someone who is skilled at using what is available under stressful circumstances—is necessary for leveraging law enforcement's role at a critical event.

C.   CONCLUSION #2: ICS IGNORES THE EDGE OF CHAOS

ICS is most challenging to implement during the first minutes or even hours of a no-notice event—the same period when the police, as the first-arriving first responders, are most active. Leonard Howard et al. list factors present during the edge of chaos that contribute to the "uncertain, ambiguous, confusing, and unstructured task environment":

- high-consequence

- complex

- novel (no pre-prepared script-plans must be developed in real time as the event evolves)

- volatile/rapidly evolving

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[185] Police Foundation, *Police under Attack*, 83.

- chaotic

- noisy (due to circumstances and reactions of survivors, bystanders, citizens, responders and leaders)[186]

David Snowden and Mary Boone, creators of the Cynefin framework, call this time period "chaotic." The Cynefin framework divides operative time periods into five domains: simple, complicated, complex, chaotic, and disordered.[187] Leaders must respond differently to each domain:

> *Simple* and *complicated* contexts assume an ordered universe, where cause-and-effect relationships are perceptible, and right answers can be determined based on the facts. *Complex* and *chaotic* contexts are unordered—there is no immediately apparent relationship between cause and effect, and the way forward is determined based on emerging patterns. The ordered world is the world of fact-based management; the unordered world represents pattern-based management. The very nature of the fifth context—*disorder*—makes it particularly difficult to recognize when one is in it. Here, multiple perspectives jostle for prominence, factional leaders argue with one another, and cacophony rules.[188]

In Snowden and Boone's chaotic period, which they also refer to as the "realm of the unknowables," they describe the role of a leader as one whose job is to "staunch the bleeding, not to discover patterns."[189] Identifying and recognizing the chaotic period as a separate but important period in emergency response gives officers time to stop the event *before* searching for viable avenues of recovery. Active shooter protocol has moved toward this model; officers are required to continue searching for the gunman, even when injured people are present, so that they can stop the violence, identifying the source of the problem.

Police self-deployment as a response to the edge of chaos can be positively compared to the body's response to a paper cut. When the body sustains a paper cut, a flood

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[186] Herman B. "Dutch" Leonard et al., "Staying Strong: Marathon Security in Boston and London," *International Centre for Sport Security Journal* 2, no. 2 (July/August 2014): 15.

[187] D.J. Snowden and M.E. Boone, "A Leader's Framework for Decision Making," *Harvard Business Review* 85 no. 11, (2007): 72.

[188] Ibid.

[189] Ibid.

of platelets rush to the damaged area to form a clot, or staunch the bleeding, as the first cellular response. The platelets release a chemical that calls for other cells to respond. A massive response at the cellular level causes inflammation and swelling at the site of the cut, turning the skin red and hot but also alerting the body to scan for infective agents.[190] Although the cut may look bad, this response is actually a vital part of the healing process. The violence at the Boston Marathon bombings and the Dorner manhunt was like a cut—a brutal, unexpected interruption in the normalcy of life. First responders reacted, knowing little about what was happening but with accountability to stabilize and organize the event. If the event proves unpredictable, as shown in the shootouts during both cases, more police are called in to staunch the bleeding. This chain of events eventually resolves into established order, when ICS can be applied. Until there is order, the structures of ICS provide no assistance with resolution, organization, or response.

Understanding that it may take time for the structure of the event to emerge from the disorder, and giving responders at the frontlines permission to react, may actually create a more effective response. Nancy Roberts calls it "groping along":

> It is better to just get on with it rather than wait until everything is in place, an unlikely occurrence anyway given the circumstances. What really matters is each person's willingness to make a "leap of faith" that commits him or her to working tougher, acting with integrity and trusting that somehow something will come out of the collective effort without any guarantees that it will. What all this amounts to is less heroics, more humility and a greater appreciation for experimentation, "groping along" and "muddling through" than we normally permit ourselves given the weight of our rational analytical tool kit and strategic management practice.[191]

When ICS fails to recognize the edge of chaos, a group of potentially valuable responders are also excluded from the event. A phenomenon in disaster response known as *volunteer convergence*—when concerned yet unrequested citizens descend upon a scene—is comparable to police self-deployment.[192] Research shows that ICS fails both to address

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[190] Kimberly Rebb, "OUCH! Healing Hurt Bodies," Ask a Biologist, accessed August 31. 2017, https://askabiologist.asu.edu/explore/when-body-attacked.

[191] Roberts, "Coping with Wicked Problems," 372.

[192] Buck, Trainor, and Aguirre, "Critical Evaluation," 20.

volunteer convergence and to provide for the incorporation of aid from spontaneous groups, which can often achieve results faster and more efficiently in the edge of chaos in disasters.[193] While ICS sets up elaborate systems to stage, process, and credential "authorized" responders, these systems become overwhelmed and are ignored, as illustrated in Boston and the Dorner manhunt.

As documented by practitioners, policy makers, and the case studies in this thesis, ICS is less comprehensive and more problematic within the law enforcement domain.[194] Buck, Trainor, and Aguirre, authors of "A Critical Evaluation of the Incident Command System and NIMS," suggest that unlike other first responders, police officers rarely use ICS.[195] During the Boston Marathon bombings, police leadership from several agencies successfully integrated a unified command. At the street level in Boston and during the Dorner manhunt, however, the response was less coordinated. One reason was the failure of ICS to recognize the edge of chaos.

D.   RECOMMENDATION #2: NIMS AND ICS MUST INCORPORATE THE EDGE OF CHAOS

NIMS and ICS must recognize and incorporate the initial chaotic phase of an incident into the response structure for two reasons. First, because chaos is normal. According to Cynthia Renaud,

> Making such patterns part of an everyday life will prepare first responders at least to expect chaos and complexity as normal. Too often, first responders seem to feel that initial chaos is a sign of their inability to handle a situation. On the contrary, they must see that chaos is what they are to conquer or transform–that chaos is their necessary challenge.[196]

Second, because the edge of chaos offers opportunities for creative and adaptive solutions that vanish once the event settles into the ICS structure. In the Cynefin framework, Snowden and Boone describe the chaotic domain as the best place for leaders to impel

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[193] Buck, Trainor, and Aguirre, "Critical Evaluation," 20.

[194] Ibid., 5.

[195] Ibid., 4.

[196] Renaud, "Making Sense in the Edge of Chaos," 66.

innovation; in this domain, people are more open to novelty and directive leadership than they would be in other contexts.[197]

This failure to recognize the chaotic first minutes—or even hours—of a critical event has long been a criticism of ICS. It is time to at least recognize the edge of chaos, so law enforcement can move to harness first responders' energy and innovation and protect those who work during this crucial period.

E.   CONCLUSION #3: LESSONS LEARNED ARE NOT SHARED, SO LEARNING IS LIMITED

Police officers in the United States have at least a basic level of ICS training thanks to the DHS mandate and federal grant incentives. Technological innovations and changes in communications and response protocol have improved reaction time and first responder safety. ICS prohibits self-deployment, yet incidents continue to occur. One reason may be a lack of universal standards for after-action reporting. Research conducted by Amy Donahue and Robert Tuohy determined that there exists "no independent validation mechanism to establish whether findings and lessons are right."[198] As demonstrated in the Oklahoma City bombing, even reports of the same incident have different conclusions about similar behavior. Agency perspectives, local viewpoints, or fear of political retribution and legal recourse hamper absolute veracity in after-action reporting.[199]

Even when published, after-action reports have no standardized dissemination. Although many are publicly available through online searches, no universal mechanism ensures distribution within the emergency response discipline, the state, the region, or the nation. Responders must search for reports to obtain them, which also requires them to have knowledge of the event.[200] While some disasters and events have only regional applicability, events like an active shooter response have nationwide implications for first

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[197] Snowden and Boone, "Leader's Framework," 73.

[198] Amy Donahue and Robert Tuohy, "Lessons We Don't Learn: A Study of the Lessons of Disasters, Why We Repeat Them, and How We Can Learn Them," *Homeland Security Affairs* 2, no. 2 (2006): 12, https://www.hsaj.org/articles/167.

[199] Ibid., 13.

[200] Ibid., 13, 14.

responders. The Boston Marathon bombings were recognized internationally as a terrorist event. Conversely, the Dorner manhunt gained only regional attention. Nonetheless, both events exhibited similar issues with police self-deployment and opportunities for lessons learned.

When agencies create after-action reports, recommendations may be minimized or even ignored. The episodic black swan nature of critical events and the substantial effort needed to radically alter training programs or agency policy, combined with changing politics, can produce an environment unconducive to change. The argument that police self-deployment is a byproduct of the event rather than a systemic issue also contributes to failures to fully absorb lessons learned. Donahue and Tuohy argue that the lack of a formalized process also hinders future improvements:

> There is a lack of systems to identify and disseminate lessons. Even when lessons are identified, most learning and change processes lack a formal, rigorous, systematic methodology. Simplistically, the lesson learning and change process iterates through the following steps: Identify the lesson-recognize the causal process-devise a new operational process-practice the new process-embed/institutionalize and sustain the new process.[201]

While the rigorous planning and training programs instituted by NIMS and ICS have greatly improved critical incident response since 9/11, the follow-up to these incidents seems less coordinated. One suggestion at the federal level is standardize after-action reports and establish a clearinghouse for review.

F.   RECOMMENDATION #3: DHS SHOULD ESTABLISH A STANDARDIZED AFTER-ACTION REPORT FORMAT AND A NATIONAL CLEARINGHOUSE

There are currently no universal standards for creating after-action reports. While various organizations, such as the Police Foundation and Tri-Data Systems publish comprehensive professional reviews, there are no requirements that police agencies follow a specific format. The consequences include incomplete information, biased or skewed viewpoints, and unfamiliar definitions or descriptive language. While the Homeland

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[201] Donahue and Robert Tuohy, "Lessons We Don't Learn," 14.

Security Exercise and Evaluation Program provides formal templates for exercise and drill reviews, they fail to translate well to an actual event. Moreover, with no clearinghouse to submit after-action reports to, emerging trends, lessons learned, incident types, success stories, police self-deployment patterns, and other relevant information cannot be tracked at the national or regional level. Without a comprehensive reporting process, clearinghouse, or database, no method exists for dissemination of after-action reports. Information cannot be amalgamated for research or improvement, and law enforcement professionals may miss sharable solutions.

One possible model is the Federal Aviation Administration's Aviation Safety Information Analysis and Sharing (ASIAS) system. On a website available to the public, ASIAS enables users to "perform integrated queries across multiple databases, search an extensive warehouse of safety data, and display pertinent elements in an array of useful formats."[202] While there are security issues with many critical events, the publicly available information found in the online after-action reports of the Dorner manhunt and Boston Marathon bombings is invaluable in a shared environment. Collaboration is at the heart of unified command and is the best method for taming wicked problems. A nationally managed sharing system with universal criteria only enhances critical incident response.

G.   FINAL THOUGHTS

Police self-deployment is a wicked characteristic of law enforcement. When officers self-deploy, their actions and ingenuity can save lives, create solutions, and reduce damage and injury. Nonetheless, uncontrolled self-deployment can produce significant traffic problems, create officer safety issues, and damage inter-agency relationships. Prevention of self-deployment is currently limited to its outright prohibition and recommendations for closer adherence to ICS protocol. ICS training, however, does not recognize the edge of chaos and has no curriculum based on lessons learned. ICS, as currently structured, has earned success in law enforcement only at the unified command

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[202] Federal Aviation Administration Aviation Safety Information Analysis and Sharing (ASIAS), accessed August 31, 2017, http://www.asias.faa.gov/pls/apex/f?p=100:1:0::NO.

level. Problems with adherence to ICS are common at the street or tactical level, even within the same event, as evidenced by the case studies in this thesis.

Change to ICS must first start *within* law enforcement. Agencies and departments must accept self-deployment as a wicked characteristic and train to tame rather than solve problems. Acceptance of self-deployment should also include admitting that the edge of chaos is a normal and necessary part of response to an event—especially those that involve violent criminal behavior—and primary jurisdiction of police response. Then, law enforcement can work to incorporate the edge of chaos into ICS structure and training. Incorporating the edge of chaos into training and ICS structure and accepting self-deployment as a wicked characteristic will lead to a reduction in bad self-deployment, the exploitation of good self-deployment, and improved law enforcement response to critical incidents.

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APPENDIX. ANALYTICAL TOOL

	Rittel and Webber's Ten Characteristics of Wicked Problems[203]	
	Wicked Problem Characteristic	**Description**
1.	"There is no definitive formulation of a wicked problem."	"The formulation is the problem. The process of formulating the problem and of conceiving a solution (or re-solution) is identical, since every specification of the problem is a specification of the direction in which a treatment is considered."
2.	"Wicked problems have no stopping rule."	"There are no criteria that tell when a solution has been found. The process of solving the problem is identical with the process of understanding its nature. The planner terminates work on a wicked problem not for reasons inherent in the logic of the problem."
3.	"Solutions to wicked problems are not true or false, but bad or good."	"There are no 'conventionalized criteria'—many parties are equally equipped, interested and/or entitled to judge the solutions, although none has the power to set formal decision rules to determine correctness."
4.	"There is no immediate and no ultimate test of a solution to a wicked problem."	"Any solution, after being implemented, will generate waves of consequences over an extended-virtually an unbounded-period of time."
5.	"Every solution to a wicked problem is a one-shot operation."	"Whenever actions are effectively irreversible and whenever the half-lives of the consequences are long, *every trial counts*. And every attempt to reverse a decision or to correct for the undesired consequences poses another set of wicked problems, which are in turn subject to the same dilemmas."
6.	"Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan."	"There are no criteria which enable one to prove that all solutions to a wicked problem have been identified and considered."
7.	"Every wicked problem is essentially unique."	"Despite long lists of similarities between a current problem and a previous one, there always might be an additional distinguishing property that is of overriding importance."

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[203] Adapted from Rittel and Webber, "Dilemmas in a General Theory of Planning," 161–167.

	Wicked Problem Characteristic	Description
8.	"Every wicked problem can be considered a symptom of another problem."	"The process of resolving the problem starts with the search for causal explanation of the discrepancy. Removal of that cause poses another problem of which the original problem is a 'symptom.' In turn, it can be considered the symptom of still another 'higher level' problem."
9.	"The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution."	"There is no rule or procedure to determine the 'correct' explanation or combination of them. The reason is that in dealing with wicked problems there are several more ways of refuting a hypothesis than there are permissible in the sciences."
10.	"The planner has no right to be wrong."	"Planners dealing with wicked problems are liable for the consequences of the actions they generate; the effects can matter a great deal to those people that are touched by those actions."

WEXLER'S MORAL CHARACTERISTICS[204]

The Responsibility Nexus
"Wicked problem contexts license innovation or, at least, the claimants' (knowledge sellers') belief that their views are purportedly new and original."

The Risk of False Assurance
"The more wicked the problem, the harder it is for well-intended problem solvers to educate about risk. In their determination to push the knowledge frontier and distinguish themselves by their claims, they may promise more than they can deliver."

The Politics of Urgency
"Political refers to the manner in which the attention-getting use of "urgency" can be used to rally others about a cause of which one claims to have the best answer. The call to urgency justifies lower scrutiny and monitoring of the solution."

Confusion over Wicked Problem Solutions
"A portion of wicked problems are, unsolvable, but the tame-wicked problem is unclear on how to distinguish these from other wicked problems that, with great effort, are solvable."

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[204] Adapted from Wexler, "Exploring Wicked Problems," 536–538.

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